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CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES [1]

November 30–December 27, 1930

The prevalence of certain important communicable diseases, as indicated by weekly telegraphic reports from State health departments to the Public Health Service, is summarized below. The underlying statistical data are published weekly in the Public Health Reports under the section entitled "Prevalence of Disease."

Poliomyelitis.—The poliomyelitis incidence has shown another decline, this time about 60 per cent from the incidence of the preceding period. In a group of 43 States, 294 cases were reported, as compared with 725 during the preceding period.

Part of this decline, though not all, represents a normal seasonal drop. The current incidence is about 3.3 times the incidence for the corresponding period of last year, whereas, during the preceding period the ratio to last year was slightly above 4. In other words, the picture suggests a moderate decline in epidemic tendency in this relative sense as well as in an absolute sense.

Judged by these ratios to last year's experience, the epidemic tendency seems to be declining in all regions except some portions of the South and East.

Meningococcus meningitis.—During the current 4-week period, 363 cases of meningococcus meningitis were reported, representing about 54 per cent of the incidence for the corresponding period of last year. During the preceding period of this year 319 cases were reported, i. e., about 72 per cent of the cases for the corresponding period of last year. In other words, the situation continues to improve in relation to last year.

Smallpox.—During the current period 1,966 cases of smallpox were reported, as compared with 3,897 during the same period last year, when there had been a pronounced rise. The current incidence is not far from the average of the years preceding 1929.

Influenza.—The incidence continues to be the lowest of recent years for the season involved. Reported cases numbered 2,361, as

[1] From the Office of Statistical Investigations, U. S. Public Health Service. The numbers of States included for various diseases are as follows: Typhoid fever, 41; poliomyelitis, 43; meningococcus meningitis, 42; smallpox, 42; measles, 38; diphtheria, 42; scarlet fever, 41; influenza, 31.

compared with 3,307 during the same period of last year, i. e., a decline of about 30 per cent. This favorable situation applies to all regions except the Great Lakes section, where a slight excess was reported over last year's incidence.

Typhoid fever.—The reported incidence of typhoid fever (1,070 cases) for the current period represents a drop of about 44 per cent in four weeks. This decline represented largely the normal seasonal influence. In relation to the experience of the preceding two years, the current incidence is still about 50 per cent in excess. It is high in all regions except the Great Lakes and the far West.

Scarlet fever.—For the country as a whole, the incidence of scarlet fever is not far from the seasonal average of recent years, 13,470 cases having been reported, against 15,203 last year, for this period.

Diphtheria.—Once again there is a record low prevalence of diphtheria, taking due account of season; reported cases numbered 5,529, as compared with 7,592 for the same period last year—a decline of about 25 per cent. Three years ago, during the corresponding 4-week period, 9,097 cases were reported.

All regions share in this gratifying situation, though in different degrees.

Measles.—The reported incidence of measles, 11,529 cases, is low in relation to recent years. Since 1926, when 21,371 cases were reported during these four weeks, there has been a decline each year. During the four years the decline has been almost 50 per cent. There are reasons for suspecting, however, that part of the decline may be due to less complete reporting during recent years.

Mortality, all causes.—During the current period, the mortality from all causes as reported by the Census Bureau averaged 11.9 per thousand population, annual basis, compared with 13.3 during this period last year.

AGE INCIDENCE OF COMMUNICABLE DISEASES IN A RURAL POPULATION[1]

By Edgar Sydenstricker, *Statistician, United States Public Health Service,* and *Director, Division of Research, Milbank Memorial Fund,* and Selwyn D. Collins, *Associate Statistician, United States Public Health Service*

The importance of data relating to the incidence of the acute infectious diseases among persons of different ages in populations living in various environments does not need lengthy explanation; it is fully realized because of the aid which information of this kind can give to epidemiology, to sound administrative practice, and to

[1] From the Office of Statistical Investigations, United States Public Health Service, and the Division of Research, Milbank Memorial Fund.

some degree to immunology. The valuable records collected in Providence over a long period of years by Chapin (*1*) constituted the earliest as well as one of the most useful contributions to a mass of data that slowly have been growing since. Among other contributions may be mentioned the studies of Butler (*2*), Corney (*3*), Collins (*4*), Henderson (*5*), Halliday (*6*), Doull (*7*), Frost (*8*), Fales (*9*), Godfrey (*10*), Lombard and Scamman (*11*), Sydenstricker (*12*), and Wilson (*13*), which have recently been summarized by one of us (S. D. C.) (*4*). Practically all of these studies, with the exception of those by Fales and by Lombard and Scamman relate, however, to urban populations.

The present communication, while including a comparatively small number of persons, may be of interest because it deals with a rural population in Cattaraugus County, N. Y., where the Milbank Memorial Fund has been assisting the development of public health activities and where the United States Public Health Service, with the cooperation of the fund and the county health department, began a morbidity study and a series of epidemiological studies in 1929. The data presented here are of two kinds: (1) The reports of certain communicable diseases made to the county health department during the period 1925–1929, classified according to age of the person attacked and residence, the latter being with respect to the degree of rurality of the population; (2) histories of prior attacks of certain communicable diseases among persons of different ages which were obtained by field assistants of the United States Public Health Service in the course of house-to-house visits in a population of approximately 5,000 in one area of this county. The first set of records enables comparisons to be made similar to those published by Fales for broad urban and rural groups, but with finer distinction as to the rural character of a population which he classified as rural. The second set of data are similar to those obtained by Frost in Baltimore, Lombard and Scamman in Massachusetts, and by Sydenstricker and Collins in Hagerstown, and are comparable, in a lesser degree, to the results of studies made by some others to whom reference will be made later.

The reports made to the county health department during the period 1925–1929 included 3,156 cases of measles, 563 cases of scarlet fever, 495 cases of German measles, 1,456 cases of whooping cough, the other diseases being too few in number to yield significant results. These have been subdivided according to age and according to type of locality, as follows: (*a*) Cases occurring in Olean, a city of about 23,000; (*b*) in villages of not over a few hundred population; (*c*) among persons living on farms, designated as "rural." The distri-

butions according to age groups for these four diseases are given in Table I.[2]

TABLE I.—*Comparison of distributions according to age of reported cases of measles, scarlet fever, and whooping cough in Olean, villages, and rural part of Cattaraugus County, 1925–1929*

Age	Per cent			Number		
	Olean	Villages	Rural	Olean	Villages	Rural
MEASLES						
0 to 4	33.29	20.40	16.84	472	134	182
5 to 9	54.80	44.44	31.54	777	292	341
10 to 14	7.62	20.55	24.14	108	135	261
15 to 19	1.90	7.31	13.78	27	48	149
20+	2.40	7.31	13.69	34	48	148
Total	100.00	100.00	100.00	1,418	657	1,081
SCARLET FEVER						
0 to 4	23.19	20.00	14.56	48	19	38
5 to 9	37.68	37.90	31.03	78	36	81
10 to 14	18.36	20.00	28.74	38	19	75
15 to 19	7.25	11.58	9.58	15	11	25
20+	13.53	10.53	16.09	28	10	42
Total	100.00	100.00	100.00	207	95	261
WHOOPING COUGH						
0 to 4	49.76	52.36	37.39	312	133	215
5 to 9	45.29	43.31	41.39	284	110	238
10 to 14	3.19	3.15	16.35	20	8	94
15 to 19	1.12	.39	2.78	7	1	16
20+	.64	.79	2.09	4	2	12
Total	100.00	100.00	100.00	627	254	575

The differences in the age distributions can be shown in more detail for measles because of the larger number reported. The distributions are given by single years up to 15 years of age in Table II and plotted in Figure 1. The concentration of cases at the ages when children enter school is marked and may be due in part to more complete reporting at those ages, but the contrast in the distributions is quite striking, particularly between the town of Olean and the rural part of the county.

[2] Sufficiently detailed information on the age distribution of the population covered are not available for making adjustments of the percentages to a single age distribution. This refinement, however, does not seem necessary as the following distributions show:

Age distributions of population under 20 years in Olean and rural part of Cattaraugus County (State census, 1925)

Age group	Per cent (all ages=100 per cent)	
	Olean	Rural part •
0 to 4	9.53	9.13
5 to 9	9.91	9.68
10 to 14	9.25	9.41
15 to 19	9.13	8.70

• Exclusive of Salamanca (10,000 population) and Gowanda, but including villages.

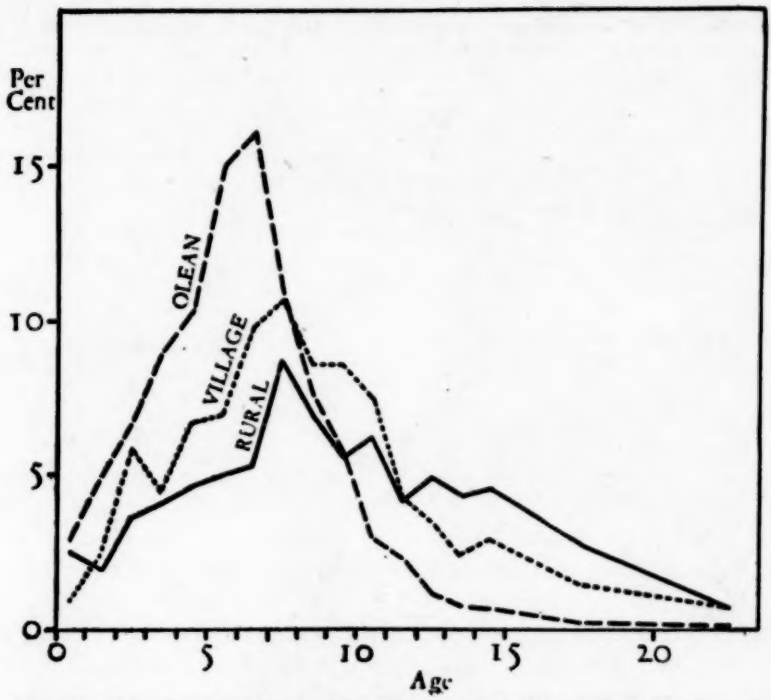


FIGURE 1.—Distribution according to single years of age, up to 15 years, of measles cases reported to the county health department for Olean, villages, and rural part of Cattaraugus County, N. Y., 1925–1929

TABLE II.—*Comparison of distribution according to age of reported cases of measles in Olean, villages, and rural part of Cattaraugus County, 1925–1929*

Age	Per cent			Number		
	Olean	Villages	Rural	Olean	Villages	Rural
−1	2.89	0.91	2.50	41	6	27
1	4.58	2.44	1.94	65	16	21
2	6.63	5.78	3.70	94	38	40
3	8.96	4.57	4.07	127	30	44
4	10.23	6.70	4.63	145	44	50
5	14.88	6.85	5.00	211	45	54
6	16.01	9.74	5.27	227	64	57
7	10.72	10.65	8.79	152	70	95
8	7.55	8.68	6.94	107	57	75
9	5.64	8.53	5.55	80	56	60
10	2.89	7.46	6.20	41	49	67
11	2.26	4.26	4.16	32	28	45
12	1.13	3.50	4.90	16	23	53
13	.71	2.44	4.35	10	16	47
14	.63	2.89	4.53	9	19	49
15-19	1.90	7.31	13.78	27	48	149
20+	2.40	7.31	13.69	34	48	148
Total	100.00	100.00	100.00	1,418	657	1,081

The indications are summarized in the following table (Table III) where a comparison is presented of the first quartile, median, and last percentile of the age distributions for each disease in the areas named.

TABLE III.—*Comparison of first quartiles, medians, and last percentiles of the age distributions of the reported cases of certain diseases in specified sections of Cattaraugus County, 1925–1929*

Disease	Age in years		
	Olean	Villages	Rural
Measles:			
First quartile	4.2	5.7	6.6
Median	6.1	8.3	10.3
Last percentile	10.7	17.6	24.7
Scarlet fever:			
First quartile	5.2	5.8	6.6
Median	7.9	8.7	11.0
Last percentile	26.0	23.0	28.0
Whooping cough:			
First quartile	2.9	2.7	3.5
Median	5.0	4.8	6.5
Last percentile	8.5	9.0	12.7
German measles:			
First quartile	[1] 7.2	7.4	
Median	[1] 9.7	12.1	
Last percentile	[1] 15.7	21.0	

[1] Including Salamanca, a town of 10,000 population.

It will be noted that, with hardly an exception, the more rural the population—even within an area ordinarily classified as "rural"—the higher are the ages at which each of these diseases occur. This finding is not only in accord with the statistical results of Fales's (*9*) comparisons of "urban" and "rural" data but adds weight to his general conclusion that for any one of the diseases under consideration "the difference in risk (of attack) between younger and older children tends to become less pronounced as one proceeds to the small cities, villages, and open country" (p. 780).

Reports of cases of most diseases notifiable under law are notoriously incomplete, especially the less fatal diseases over which no really effective control has been devised. In general, this has been true of Cattaraugus County.[3] Moreover, there is evidence to sup-

[3] At this writing sufficient records are not yet available from the morbidity study now under way to warrant any conclusions as to the completeness of reporting in rural parts of the county. In Olean, however, the cases appearing on the sickness records of about 540 children in one of the graded schools for 2 years were checked against the reports made to the health department with the following result:

Completeness of reporting of certain diseases among 540 school children in Olean, N. Y., 1926–1927 and 1927–1928

Disease	Cases recorded on school sickness report	Cases reported to health department	Completeness of reporting
			Per cent
Diphtheria	0	0	
Scarlet fever	4	4	100
Measles	55	34	62
Whooping cough	21	10	48
German measles	95	22	23
Chicken pox	13	0	0

These percentages are in general agreement with those found by Sydenstricker (*14*) for Hagerstown, Md. They indicate somewhat more complete reporting of measles and whooping cough and less complete reporting of chicken pox in Olean than in Hagerstown.

port the natural suspicion that the completeness of reporting of at least some of these diseases varies with age,[4] and any comparison of the age distributions for different areas must be made upon the assumption that these variations are similar. Obviously, therefore, any data that yield reasonably accurate information on the true incidence of these diseases are of value, particularly for rural areas.

In the initial canvass of approximately 5,000 persons in a rural part of Cattaraugus County, who form the population group for epidemiological observation by the United States Public Health Service, questions as to the past occurrence of certain communicable diseases were asked for all individuals under 30 years of age in the households visited. The informants in most instances were the housewives and the answers are believed to be as accurate as they could give them. Obviously, cases that did not manifest definite clinical characteristics were not recognized and therefore were not known, and probably some cases were forgotten, especially for older persons. The data thus must be regarded as understatements to a certain degree. They are summarized in Table IV.

TABLE IV.—*History of communicable disease among persons of different ages in a rural area of Cattaraugus County, N. Y.*

Disease	Per cent of persons observed who at some time in their lives had suffered attacks, classified by age at date of inquiry						
	Total under 30	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29
Measles	62.3	17.6	46.0	67.6	78.8	83.7	88.6
German measles	26.5	6.3	13.3	25.8	35.8	43.0	40.5
Whooping cough	60.4	19.2	46.7	71.0	77.1	78.0	77.6
Chicken pox	51.6	12.9	43.6	63.5	66.4	66.0	62.6
Mumps	36.4	11.5	26.8	40.2	45.1	49.8	50.1
Scarlet fever	9.5	.9	6.0	11.5	14.2	13.0	12.8
Diphtheria	1.7	0	.8	1.0	2.4	2.9	3.7
Typhoid fever	1.4	0	.4	.5	2.2	2.2	3.7
Smallpox	.4	0	0	.7	0	.7	1.1
Meningitis	.1	0	.2	0	0	.2	.3
Poliomyelitis	.4	0	.4	1.0	0	.2	0
Number of persons observed	2,491	426	483	414	410	406	352

[4] Sydenstricker and Hedrich (*15*) using the data obtained by house-to-house canvasses and the reports to the health department in Hagerstown, Md., made the following estimates for measles, whooping cough, and chicken pox:

Estimated completeness of reporting to the health department of certain communicable diseases at specific ages, Hagerstown, Md., 1922 and 1923

Age	Estimated per cent of cases that were reported		
	Measles	Whooping cough	Chicken pox
0 to 4	21.4	17.0	12.2
5 to 9	41.6	18.4	24.3
10 to 14	34.4	40.6	42.9
15+	50.0	10.0	50.0

The Cattaraugus results in general approximate the findings of Lombard and Scamman (*11*) for Shelburne and Buckland Townships in Massachusetts, which were largely rural; for some diseases (chicken pox, measles, and whooping cough) the percentages having histories of past attacks are strikingly similar, although the number of persons observed in the Massachusetts area is quite small.[5]

The particular point of interest afforded by the foregoing data lies in a comparison with similar data for urban areas. In Table V, therefore, such a comparison of the Cattaraugus County results is made with the results of a similar study in Hagerstown, Md., a city of some 30,000 inhabitants, where the same method (*16*) of obtaining information and, to some extent, the same field personnel were employed.

TABLE V.—*Comparison of communicable disease history among persons of different ages in an urban area (Hagerstown, Md.) with that in a rural area (in Cattaraugus County, N. Y.)*

Disease and area	Per cent of persons observed who at some time in their lives had suffered attacks, classified by age at date of inquiry					
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29
Measles:						
Cattaraugus	17.6	46.0	67.6	78.8	83.7	88.6
Hagerstown	22.3	75.8	92.8	93.0	93.8	91.1
Whooping cough:						
Cattaraugus	19.2	46.7	71.0	77.1	78.0	77.6
Hagerstown	17.6	56.9	76.3	78.3	79.4	78.2
Scarlet fever:						
Cattaraugus	.9	6.0	11.5	14.2	13.0	12.8
Hagerstown	1.7	4.6	7.7	10.8	9.4	10.5
Diphtheria:						
Cattaraugus	0	.8	1.0	2.4	2.9	3.7
Hagerstown	1.8	5.6	8.3	8.6	12.2	11.8
Typhoid fever:						
Cattaraugus	0	.4	.5	2.2	2.2	3.7
Hagerstown	.1	1.3	3.2	5.5	9.2	12.8
Smallpox:						
Cattaraugus	0	0	.7	0	.7	1.1
Hagerstown	.5	1.9	2.3	1.6	1.1	2.2
Number of persons observed:						
Cattaraugus	426	483	414	410	406	352
Hagerstown	840	915	760	610	485	528

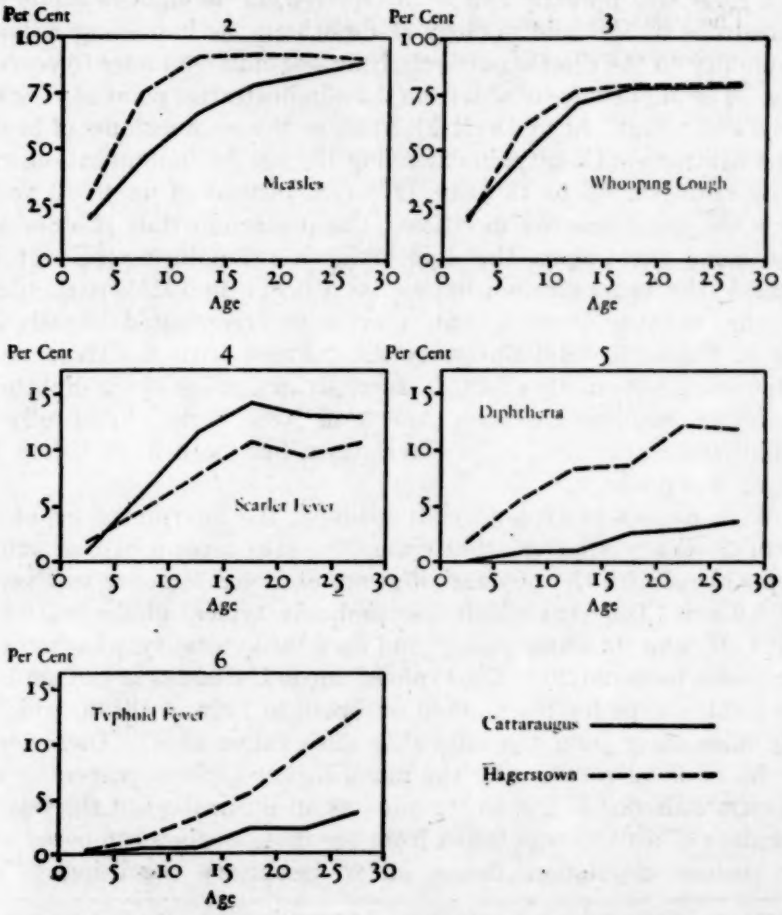
[5] The results of the Shelburne-Buckland survey are summarized in the following table from Lombard and Scamman's paper (*11*, p. 628):

Contagious diseases in Shelburne-Buckland

Disease	Per cent who had the disease prior to the survey, by age groups			
	0 to 4	5 to 9	10 to 14	15 to 19
Chicken pox	15.6	41.8	61.1	60.7
Diphtheria	0	2.0	4.4	8.3
German measles	4.1	23.5	33.3	22.6
Measles	9.0	29.6	63.4	69.1
Mumps	1.6	10.2	18.9	35.7
Scarlet fever	0.8	10.2	14.4	35.7
Whooping cough	24.6	55.0	74.5	71.4
Number of persons	122	98	90	84

It will be noted that the percentages are essentially cumulative and are comparable.

The *lower* percentages for Cattaraugus and the lag in the curves, as plotted in Figures 2 to 6, for all of the diseases except scarlet fever, are of particular interest.



FIGURES 2-6.—Percentages of a rural population (in Cattaraugus County, N. Y.) and of an urban population (in Hagerstown, Md.), of different ages, who had previously suffered an attack of measles, whooping cough, scarlet fever, diphtheria, or typhoid fever, as ascertained by canvasses of households

As regards scarlet fever, a reasonable explanation of the apparent exception may be suggested by the occurrence of epidemics of unusual magnitude in the Cattaraugus area during 1920–1923 and 1926–27,[6] whereas no epidemic of similar magnitude had occurred in Hagerstown in a period comparable chronologically.

[6] The reported incidence of scarlet fever in these years was about ten times the incidence usually reported.

As regards diphtheria, the curves for the two areas are far apart at every age period, the Cattaraugus percentages suggesting a definite "lag",[7] and the proportion of adult persons aged 25 to 29 years with a history of a previous attack in Hagerstown being over three times as high as that in the rural area. This lower prevalence of diphtheria in a rural area properly can be interpreted, in the light of the newer knowledge of the epidemiology of diphtheria, as indicating a lower immunity to the disease particularly among children under 15 years of age. The importance of this from the administrative point of view has been well recognized by Dr. R. M. Atwater, the commissioner of health for Cattaraugus County, in extending the age for immunization with toxin-antitoxin up to 15 years (*17*) (*18*) instead of up to 10 years, as is the usual practice in cities. The protection thus afforded has had some effect upon the diphtheria case rate during the past five years[8] (the immunization having been begun in 1925), particularly among younger persons, and may have accentuated slightly the lag in Figure 5. But obviously the contrast with the Hagerstown situation is not greatly affected, especially in a period of low diphtheria incidence, such as has been general in New York. Practically no diphtheria immunization in Hagerstown had been done before the study was made.

With respect to typhoid and smallpox, the interpretations of the data obviously are somewhat different. Hagerstown had an annual typhoid rate (in the population group observed for over two years) of 1.2 per 1,000 (*16*) which was probably typical of the section in 1922–23, and its water supply and excreta-disposal systems were by no means modern (*19*). The typhoid rate in Cattaraugus had not been unusual, except for the marked outbreak in 1928 in Olean, which is 30 miles away from the morbidity observation area. There seems to be no good reason why the much higher typhoid percentages in Hagerstown should not be regarded as an illustration of the relative freedom of a rural population from the disease when compared with an urban population living under insanitary conditions.[9] The

[7] The ratio of the Cattaraugus percentages to those of Hagerstown for successive age periods beginning with 5 to 9 years are 7.0, 8.3, 4.3, 4.2, and 3.2 to 1.

[8] The low immunity in Cattaraugus has been corrected to a considerable extent by the administration of toxin-antitoxin, as the following histories of immunization against diphtheria for the population under study show:

Age	Per cent immunized	Age	Per cent immunized
0 to 4	31.5	15 to 19	29.7
5 to 9	65.6	20 to 24	7.3
10 to 14	64.6	25 to 29	3.1

[9] It is planned to make a comparison later with an urban area having more modern water supply and excreta disposal facilities.

relatively small opportunity for contact in a rural area is an even greater factor in the wide difference in smallpox incidence, and this in spite of the fact that a much larger proportion of persons had been vaccinated in Hagerstown than in Cattaraugus County in all of the age periods considered save "under 5" as the following table shows:

TABLE VI.—*Comparison of the history of vaccination against smallpox among persons of different ages in an urban area (Hagerstown, Md.) with that in a rural area (in Cattaraugus County, N. Y.)* [1]

Area	Per cent of persons observed who had been vaccinated against smallpox, classified by age at date of inquiry						
	Total under 30	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29
Cattaraugus	24.8	3.0	11.8	18.2	21.6	42.4	60.2
Hagerstown	69.8	1.5	65.1	93.7	97.8	94.3	91.8

[1] See Table V for the number of persons observed. The percentages are for persons, not frequencies of vaccination, but they indicate roughly the extent to which vaccination was done in the two areas at different ages.

By no stretch of the imagination, of course, can this observation as to smallpox incidence be regarded as suggesting the inefficacy of vaccination; rather, it points the more definitely to the importance of differences in the opportunity for infection in urban and rural areas.

The "lag" in the curves shown in Figures 2, 3, and 5 for measles, whooping cough, and diphtheria in Cattaraugus may be expected upon the hypothesis of a slower rate of immunization in a more sparsely settled area. But in the instances of measles and whooping cough, the rather interesting indication is given that in both a rural and an urban area the percentages of persons in the age period 25 to 29 who had been attacked are about the same.[10]

A further comparison of the Cattaraugus County data, scanty as they are, with the curves which Collins (4), derived from a study of the records of a number of localities, nearly all of which were urban, is not without interest. For measles (fig. 7) and whooping cough (fig. 8) it is again indicated that in both a rural area and in these larger urban areas the percentages of total population observed which had positive histories were approximately the same when about 30 years of age was reached, but the Cattaraugus experience manifested a very definite lag.

[10] This indication may seem somewhat surprising in view of the Army experience during the World War. It will be recalled that the incidence of measles among recruits from rural areas was higher than that among recruits from urban areas. (See Siler, J. F.: Communicable and Other Diseases, Vol. IX, in the Medical Department of the U. S. Army in the World War, pp. 416-417; and Long, A. C., and Davenport, C. B.: The Immunity of City Bred Recruits, Archives of Internal Medicine, 24:129.) It may be suggested, however, that the great majority of recruits were under 25 years of age. Furthermore, the smallness of our urban and rural samples should be kept in mind; further data are necessary for dependable generalizations.

In the Cattaraugus survey an inquiry was also made as to deaths among children of each family and information was obtained as to age, date, and cause of death. This made possible a tabulation of persons having had attacks of certain communicable diseases among

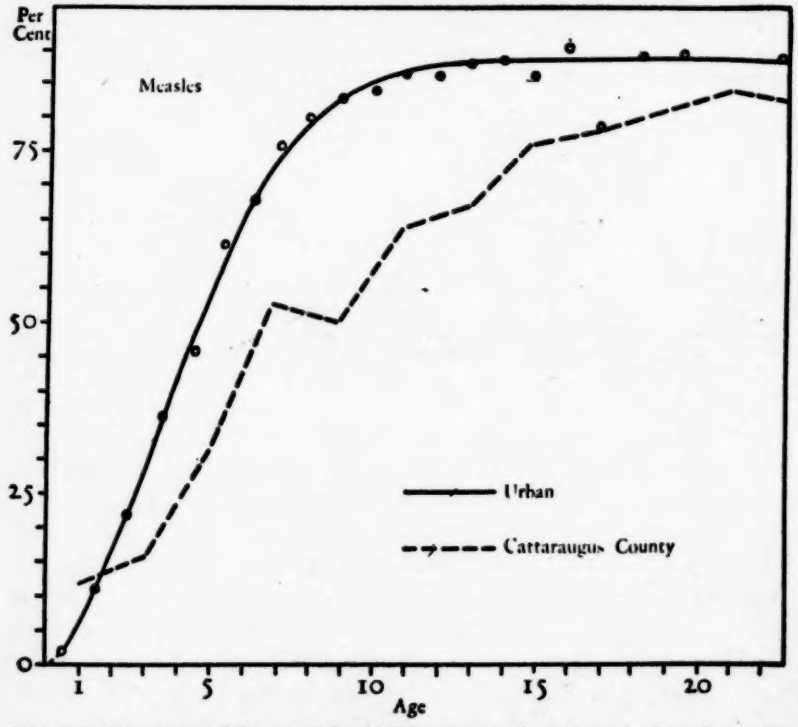


FIGURE 7.—Percentages of the population of different ages who had previously suffered an attack of measles, compared for a rural area in Cattaraugus County, N. Y., and for various localities, principally urban. The smoothed graph for "urban" is of the catalytic type of the logistic curve, the equation being $y=89\ (1-e^{+.00896-.04868x-.02909x^2})$ where y=percentage of persons who have had an attack and x=age in years

persons under 30 years of age and of the deaths occurring among such persons due to the specified diseases. Fatality rates were then computed that probably are much more accurate than those based upon reported cases in rural areas, as follows:

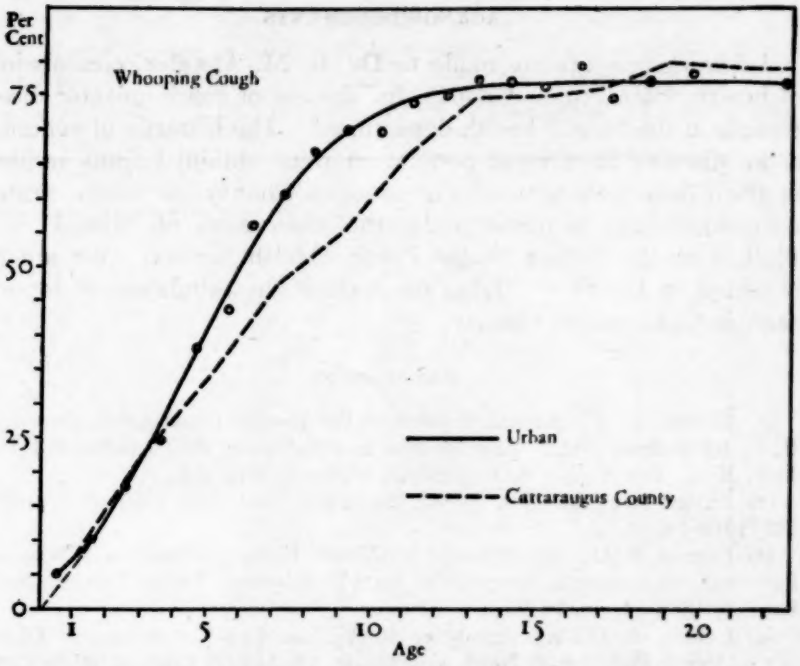


FIGURE 8.—Percentages of the population of different ages who had previously suffered an attack of whooping cough, compared for a rural area in Cattaraugus County, N. Y., and for various localities, principally urban. The smoothed graph for "urban" is of the catalytic type of the logistic curve, the equation being $y=77\ (1-e^{-.04281-.01391x-.02703x^2})$ where y=percentage of persons who have had an attack and x=age in years

TABLE VII.—*Case fatality of the common communicable diseases in a rural population in Cattaraugus County, N. Y., based on cases and deaths occurring at any time since birth among persons under 30 years of age*

Disease	Total number of cases (including deaths)	Number of deaths	Per cent of cases that were fatal
Measles	1,561	9	0.58
German measles	654	0	----
Whooping cough	1,502	5	.33
Chicken pox	1,270	0	----
Mumps	901	1	.11
Scarlet fever	243	4	1.65
Diphtheria	47	4	8.51
Typhoid	35	0	----
Smallpox	11	1	9.09
Meningitis	8	5	62.50
Poliomyelitis	14	3	21.43

Similar information was not obtained in the Hagerstown survey, but a comparison with fatality rates in another urban area will be made later.

ACKNOWLEDGMENTS

Acknowledgments are made to Dr. R. M. Atwater, commissioner of health, Cattaraugus County, for the use of communicable-disease records in the county health department. The histories of communicable diseases in a rural population were obtained from residents in the Ellicottville area of Cattaraugus County, to whom grateful acknowledgment is made, under the supervision of Miss F. Ruth Phillips of the United States Public Health Service. We are also indebted to Dr. G. A. Baker for making the tabulation of reported cases in Cattaraugus County.

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PLANKTON IN RELATION TO THE NATURAL PURIFICATION OF POLLUTED STREAMS

Reedbirds and ducks so frequently seen in their natural feeding ground, such as a marsh, excite no comment, whereas a few buzzards circling low will attract attention at once, because of the very different food habits of the latter. We know that an animal carcass is in the marsh, and that the buzzards will speedily dispose of it. Reedbirds, ducks, and buzzards all react to the presence of food.

In somewhat similar fashion the microscopic animals in water are attracted by certain materials which serve as their food. Organic matter, such as sewage, provides food for certain kinds of organisms that are not present in unpolluted water. Finding these organisms, we know that the water is polluted, and that these particular organisms will disappear, like the buzzards, when and if their food supply is exhausted.

In order to learn more about the amount and kind of work done by these organisms in nature's purification of such a polluted stream, a study[1] was made of the much-discussed Illinois River, heavily polluted by the sewage and stockyards waste from the city of Chicago, and well suited to a study of this phase of microscopic life. Approximately 1,000 weekly samples, collected at every season, and including all sections of the river (which is nearly 300 miles long), were analyzed and studied. Particular information was sought relative to the abundance of such organisms as thrive in sewage-polluted water, and their gradual replacement downstream by organisms known to require water of a better grade. The gradual purification of the stream was thus expressed in terms of the prevalent kinds of microscopic organisms, both plants and animals, and collectively known as plankton.

[1] A study of the pollution and natural purification of the Illinois River. II. The plankton and related organisms. By W. C. Purdy. Public Health Bulletin No. 198.

The relative abundance of microscopic green plants was a matter of interest, inasmuch as these plants help to purify the water by the oxygen they give off, similar to the action of the common "fish moss" in goldfish bowls.

Very briefly summarized, the results of this study indicate the following changes as the water progresses:

1. The swift upper portion of the river, heavily polluted but thoroughly mixed, is well seeded at the start with microscopic organisms from the tributary Des Plaines River and from Lake Michigan.

2. Gradually decreasing velocity distributes the suspended matter over a very large total area of bottom downstream, facilitating biological action.

3. The grayish water becomes clear, and loses its odor of sewage 70 or 80 miles downstream from the Chicago Drainage Canal outlet.

4. Correlated changes in the plankton content are: (*a*) decrease of pollutional organisms formerly predominant; (*b*) increase of organisms of the cleaner-water kinds, these becoming predominant, and maintaining this status thereafter; (*c*) increase in relative abundance of microscopic green plants.

5. In all sections of the river, and at all seasons, the microscopic green plants were decidedly more abundant, volume for volume, than were the microscopic animals.

6. Malodorous bottom sediments from the polluted upper Illinois contained very large numbers of "sludge worms," and no gill-bearing insect larvæ, whereas sediments from the lower portions of this stream were free of odor, contained very few worms, and showed a variety of gill-breathing insect larvæ.

A suitable background for the above study is furnished by 11 abstracts of similar studies made by various investigators on other streams and on the Illinois River. The large amount of data relative to the Illinois River is summarized in 54 tables and 18 graphs. There are also a number of photographs showing field conditions, and some photomicrographs of the more important plankton organisms.

COURT DECISION RELATING TO PUBLIC HEALTH

Conviction for exposing a person to venereal disease.—(Oklahoma Criminal Court of Appeals; Reynolds *v.* State, 292 P. 1046; decided Aug. 29, 1930.) Section 9008 of the Compiled Oklahoma Statutes, 1921, provided as follows:

> Any person who shall, after becoming an infected person and before being discharged and pronounced cured by a reputable physician in writing, marry any other person, or expose any other person by the act of copulation or sexual intercourse to such venereal disease or to liability to contract the same, shall be guilty

of a felony and upon conviction shall be punished by confinement in the penitentiary for not less than one year or not more than five years.

Under this statute the plaintiff in error, defendant in the trial court, was convicted of exposing a female to gonorrhea. This conviction, with the sentence modified because of certain circumstances, was affirmed by the criminal court of appeals.

DEATHS DURING WEEK ENDED DECEMBER 27, 1930

Summary of information received by telegraph from industrial insurance companies for the week ended December 27, 1930, and corresponding week of 1929. (From the Weekly Health Index issued by the Bureau of the Census, Department of Commerce)

	Week ended December 27, 1930	Corresponding week, 1929
Policies in force	74, 818, 700	75, 162, 784
Number of death claims	12, 146	12, 641
Death claims per 1,000 policies in force, annual rate	8. 5	8. 8

Deaths [1] from all causes in certain large cities of the United States during the week ended December 27, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

[The rates published in this summary are based upon mid-year population estimates derived from the 1930 census]

City	Week ended Dec. 27, 1930				Corresponding week 1929		Death rate [2] for the 52 weeks	
	Total deaths	Death rate [2]	Deaths under 1 year	Infant mortality rate [3]	Death rate [2]	Deaths under 1 year	1930	1929
Total (78 cities)	7,997	12.1	699	[4] 56	12.8	756	11.9	12.7
Akron	32	6.6	4	37	9.5	7	7.8	9.3
Albany [5]	46	18.8	8	165	17.3	1	14.8	16.4
Atlanta	86	16.7	9	92	17.9	14	15.6	16.0
White	43		6	95		11		
Colored	43	(6)	3	86	(6)	3	(6)	(6)
Baltimore [5]	214	13.9	22	77	13.5	18	14.0	14.7
White	165		12	53		7		
Colored	49	(6)	10	160	(6)	11	(6)	(6)
Birmingham	70	14.1	14	135	15.1	7	13.6	15.8
White	37		10	158		2		
Colored	33	(6)	4	98	(6)	5	(6)	(6)
Boston	209	13.9	20	58	15.1	24	14.0	14.9
Bridgeport	22	7.8	1	17	9.6	4	10.8	11.9
Buffalo	143	13.0	16	71	14.1	13	12.9	14.0
Cambridge	31	14.2	2	40	9.7	3	11.9	12.4
Camden	19	8.5	5	88	16.5	2	13.4	14.5
Canton	16	7.9	0	0	14.5	3	9.7	11.1
Chicago [5]	656	10.1	45	40	12.2	76	10.4	11.3
Cincinnati	123	14.2	7	41	14.2	7	15.6	17.0
Cleveland	189	10.9	14	42	11.7	17	11.0	12.3
Columbus	87	15.6	11	108	13.5	2	15.4	14.8
Dallas	64	12.7	9		14.0	8	11.5	11.7
White	49		7			7		
Colored	15	(6)	2		(6)	1	(6)	(6)
Dayton	42	10.9	3	45	11.1	3	10.8	11.5
Denver	92	16.6	7	76	16.8	4	15.0	14.8
Des Moines	32	11.7	5	92	10.3	0	11.6	11.5
Detroit	298	9.8	38	58	9.6	34	9.2	11.0

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended December 27, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)—Continued

[The rates published in this summary are based upon mid-year population estimates derived from the 1930 census]

City	Week ended Dec. 27, 1930				Corresponding week 1929		Death rate for the 52 weeks	
	Total deaths	Death rate	Deaths under 1 year	Infant mortality rate	Death rate	Deaths under 1 year	1930	1929
Duluth	26	13.4	1	27	12.4	1	11.6	11.5
El Paso	38	19.3	4		21.8	3	17.1	19.3
Erie	23	10.3	2	44	15.0	4	11.0	12.0
Fall River [5 7]	18	8.2	3	69	10.9	1	11.6	13.5
Flint	19	6.3	2	24	8.9	5	8.9	10.5
Fort Worth	36	11.6	7		13.8	5	11.2	12.2
White	33		6			3		
Colored	3	(8)	1		(8)	2	(8)	(8)
Grand Rapids	30	9.3	2	30	13.5	7	10.1	10.2
Houston	70	12.5	4		15.0	8	12.2	12.7
White	48		3			6		
Colored	22	(8)	1		(8)	2	(8)	(8)
Indianapolis	117	16.7	7	53	20.0	9	14.4	14.9
White	96		6	52		8		
Colored	21	(8)	1	58	(8)	1	(8)	(8)
Jersey City	79	13.0	12	104	11.8	5	11.4	12.4
Kansas City, Kans	28	11.9	1	23	21.0	8	11.8	12.8
White	23		1	28		4		
Colored	5	(8)	0	0	(8)	4	(8)	(8)
Kansas City, Mo	89	11.8	8	67	15.1	12	13.4	14.0
Knoxville	31	15.2	4	94	16.6	6	13.4	13.8
White	24		3	78		4		
Colored	7	(8)	1	243	(8)	2	(8)	(8)
Los Angeles	384	16.1	24	73	12.6	15	11.2	11.4
Louisville	85	14.4	12	103	11.7	4	13.5	15.2
White	65		10	98		3		
Colored	20	(8)	2	133	(8)	1	(8)	(8)
Lowell [7]	28	14.6	4	106	11.8	0	13.2	14.1
Lynn	26	13.2	2	56	9.7	4	10.5	11.3
Memphis	72	14.8	11	129	17.9	11	16.9	18.8
White	43		7	126		5		
Colored	29	(8)	4	135	(8)	6	(8)	(8)
Milwaukee	105	9.6	12	53	10.8	19	9.8	10.9
Minneapolis	107	12.0	11	72	12.9	8	10.8	10.8
Nashville	44	15.6	6	94	10.0	1	17.2	18.5
White	29		4	84		0		
Colored	15	(8)	2	124	(8)	1	(8)	(8)
New Bedford [7]	23	10.6	2	51	12.9	2	11.0	11.9
New Haven	51	16.3	2	31	12.2	4	12.6	13.4
New Orleans	187	21.3	20	111	23.6	21	17.5	17.9
White	118		11	93		10		
Colored	69	(8)	9	146	(8)	11	(8)	(8)
New York	1,432	10.7	119	50	11.8	150	10.7	11.3
Bronx Borough	210	8.6	11	32	10.0	20	7.8	8.3
Brooklyn Borough	403	8.1	42	44	10.5	63	9.6	10.2
Manhattan Borough	604	17.0	50	64	16.3	41	16.0	16.3
Queens Borough	179	8.5	15	60	8.1	20	7.1	7.7
Richmond Borough	36	11.9	1	19	14.2	6	13.8	15.9
Newark, N. J	104	12.2	10	52	10.9	6	11.9	12.7
Oakland	72	13.1	2	25	9.9	4	11.0	11.3
Oklahoma City	32	9.0	1	18	12.1	7	11.0	11.0
Omaha	54	13.1	6	73	11.8	0	13.5	13.5
Paterson	29	10.9	4	70	10.6	2	12.1	13.4
Philadelphia	415	11.0	29	43	11.9	46	12.5	13.1
Pittsburgh	199	15.5	17	60	13.1	22	13.8	14.8
Portland, Oreg	57	9.9	2	25	15.5	2	12.1	12.7
Providence	75	15.6	5	46	14.6	2	13.0	14.5
Richmond	56	15.9	6	87	18.0	9	14.9	16.3
White	35		4	88		3		
Colored	21	(8)	2	85	(8)	6	(8)	(8)
Rochester	73	11.7	6	53	10.5	3	11.6	12.3
St. Louis	212	13.4	11	38	14.0	15	14.0	14.6
St. Paul	53	10.2	1	10	15.7	1	10.1	10.7
Salt Lake City [5]	40	14.8	2	32	13.2	8	12.6	12.9
San Antonio	73	14.8	14		16.2	6	14.3	14.8
San Diego	40	14.0	4	84	13.5	4	14.5	15.1
San Francisco	134	11.1	5	34	9.4	8	13.2	13.0

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended December 27, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. *(From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)*—Continued

[The rates published in this summary are based upon mid-year population estimates derived from the 1930 census]

City	Week ended Dec. 27, 1930				Corresponding week 1929		Death rate for the 52 weeks	
	Total deaths	Death rate	Deaths under 1 year	Infant mortality rate	Death rate	Deaths under 1 year	1930	1929
Schenectady	19	10.3	3	93	10.9	4	11.0	12.1
Seattle	73	10.4	1	10	14.4	6	11.0	11.2
Somerville	20	10.0	3	95	8.6	1	9.7	9.3
Spokane	24	10.8	1	26	15.4	2	12.4	13.0
Springfield, Mass	36	12.5	5	86	13.7	2	12.1	12.7
Syracuse	54	13.6	3	37	13.0	3	11.7	12.9
Tacoma	23	11.2	0	0	11.3	1	12.4	11.7
Toledo	59	10.5	7	64	16.3	3	12.6	13.7
Trenton	25	10.6	5	96	19.2	4	16.5	17.1
Utica	29	14.7	3	83	16.3	0	14.5	15.5
Washington, D. C	137	14.7	8	47	15.1	9	15.2	15.4
White	88		3	26		4		
Colored	49	(6)	5	89	(6)	5	(6)	(6)
Waterbury	11	5.7	1	24	5.7	0	9.2	9.2
Wilmington, Del. [7]	37	18.4	2	48	9.9	1	14.7	13.7
Worcester	57	15.1	1	14	11.5	1	12.7	12.6
Yonkers	22	8.4	1	24	16.1	5	8.1	9.5
Youngstown	34	10.4	8	115	10.2	9	10.4	12.4

[1] Deaths of nonresidents are included. Stillbirths are excluded.
[2] These rates represent annual rates per 1,000 population, as estimated for 1930 and 1929 by the arithmetical method.
[3] Deaths under 1 year of age per 1,000 live births. Cities left blank are not in the registration area for births.
[4] Data for 73 cities.
[5] Deaths for week ended Friday.
[6] For the cities for which deaths are shown by color the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nahsville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.
[7] Population Apr. 1, 1930; decreased 1920 to 1930; no estimate made.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended January 3, 1931, and January 4, 1930

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 3, 1931, and January 4, 1930

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930
New England States:								
Maine	6	1	2	8	11	13	1	0
New Hampshire	----	3	----	----	76	5	0	0
Vermont	4	----	----	----	8	13	0	0
Massachusetts	75	108	4	11	451	288	1	6
Rhode Island	5	16	----	10	----	1	0	2
Connecticut	9	12	2	6	168	64	0	2
Middle Atlantic States:								
New York	139	129	[1] 68	[1] 20	120	314	8	18
New Jersey	93	133	26	32	178	105	2	2
Pennsylvania [2]	215	353	----	----	692	800	13	23
East North Central States:								
Ohio	84	98	26	24	53	538	9	7
Indiana	40	54	34	----	216	110	11	29
Illinois	135	234	22	31	457	299	7	10
Michigan	98	79	5	----	77	210	7	14
Wisconsin	22	20	6	35	158	493	0	1
West North Central States:								
Minnesota	12	18	----	2	15	151	3	1
Iowa	10	17	----	----	1	152	0	1
Missouri	43	43	12	19	983	60	3	9
North Dakota	10	7	----	----	15	47	0	4
South Dakota	5	5	----	----	----	3	0	1
Nebraska	6	13	17	----	8	211	0	2
Kansas	27	24	2	5	4	137	0	2
South Atlantic States:								
Delaware	6	----	4	----	3	----	0	0
Maryland [3]	18	36	11	42	57	6	1	0
District of Columbia	5	12	----	2	14	3	0	0
Virginia	----	----	----	----	----	----	----	----
West Virginia	11	7	61	30	21	17	1	0
North Carolina	56	71	28	24	125	10	0	2
South Carolina	21	31	703	1,234	----	----	2	17
Georgia	15	30	85	156	78	39	19	4
Florida	----	9	4	2	42	13	2	0

[1] New York City only.
[2] Figures for 1930 are for 2 weeks.
[3] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 3, 1931, and January 4, 1930—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930
East South Central States:								
Kentucky	8	12			18	92	4	0
Tennessee	16	13	85	205	81	41	3	3
Alabama	30	32	60	173	233	7	1	0
Mississippi	23	29					1	4
West South Central States:								
Arkansas	13	15	89	108	2	196	0	3
Louisiana	50	22	48	34	1	30	1	5
Oklahoma [4]	29	54	69	160	21	44	1	4
Texas	49	48	14	45	101	8	1	0
Mountain States:								
Montana		2			3	10	1	3
Idaho			1		28	43	0	2
Wyoming		3	3		1	5	1	2
Colorado	9	9		1	40	18	1	1
New Mexico	4	17			40	5	0	1
Arizona	2	13	6	10	83	4	1	6
Utah [3]	6	3	1	4	5	60	1	4
Pacific States:								
Washington	11	8		12	27	77	1	7
Oregon	7	13	20	59	49	22	1	1
California	53	80	54	53	169	178	12	12

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930
New England States:								
Maine	3	0	24	41	0	0	4	3
New Hampshire	0	0	2	14	0	0	0	0
Vermont	0	0	1	14	3	6	1	0
Massachusetts	5	1	262	298	0	0	2	0
Rhode Island	0	0	22	28	0	0	0	4
Connecticut	0	0	57	84	0	0	2	0
Middle Atlantic States:								
New York	4	2	494	385	1	9	7	4
New Jersey	0	1	210	203	0	0	7	5
Pennsylvania [2]	3	3	601	773	0	3	13	29
East North Central States:								
Ohio	5	2	576	312	58	215	19	9
Indiana	0	0	213	154	98	204	1	2
Illinois	6	2	345	515	34	135	21	0
Michigan	3	0	358	280	52	64	8	0
Wisconsin	2	0	102	72	3	6	5	6
West North Central States:								
Minnesota	2	0	35	100	2	4	0	0
Iowa	1	0	62	98	23	90	1	0
Missouri	2	0	119	111	6	21	1	6
North Dakota	0	1	21	37	7	15	3	0
South Dakota	0	0	16	23	16	18	1	3
Nebraska	2	0	37	58	76	35	0	1
Kansas	1	0	41	132	52	29	3	3
South Atlantic States:								
Delaware	0	0	31	8	0	0	0	2
Maryland [3]	0	0	86	64	0	0	7	2
District of Columbia	3	0	30	16	0	0	0	0
Virginia						1		
West Virginia	0	0	39	31	8	7	2	8
North Carolina	0	0	75	65	1	11	3	10
South Carolina	1	2	11	21	0	3	5	8
Georgia	0	1	27	40	0	0	2	5
Florida	0	0	16	28	0	0	3	3
East South Central States:								
Kentucky	0	0	60	34	5	40	2	2
Tennessee	0	1	54	34	6	8	4	5
Alabama	0	0	64	42	1	2	8	2
Mississippi	0	0	25	8	5	3	7	5

[2] Figures for 1930 are for 2 weeks.
[3] Week ended Friday.
[4] Figures for 1931 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 3, 1931, and January 4, 1930—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930	Week ended Jan. 3, 1931	Week ended Jan. 4, 1930
West South Central States:								
Arkansas	0	0	12	15	3	14	5	1
Louisiana	2	0	17	14	6	0	6	7
Oklahoma [4]	1	0	51	56	56	90	11	10
Texas	0	0	35	32	11	31	10	4
Mountain States:								
Montana	0	0	39	40	18	11	0	1
Idaho	0	0	5	14	2	8	2	1
Wyoming	0	0	12	5	2	12	2	0
Colorado	0	0	35	35	4	15	0	1
New Mexico	0	1	5	5	1	2	1	2
Arizona	0	0	4	14	0	10	1	1
Utah [3]	2	0	3	10	0	2	2	1
Pacific States:								
Washington	0	1	41	60	22	69	5	1
Oregon	1	0	8	20	13	24	1	1
California	16	2	86	258	67	53	8	4

[3] Week ending Friday. [4] Figures for 1931 are exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
September, 1930										
Mississippi	3	87	482	5,308	61	615	9	44	5	127
November, 1930										
Arkansas	2	91	96	106	6	56	4	67	27	113
Georgia	1	141	372	225	40	20	0	191	0	79
Nevada					2				2	

September, 1930

Mississippi:	Cases
Chicken pox	218
Dengue	6
Dysentery (amebic)	49
Dysentery (bacillary)	780
Hookworm disease	269
Mumps	90
Ophthalmia neonatorum	16
Puerperal septicemia	32
Rabies in animals	6
Trachoma	6
Whooping cough	283

November, 1930

	Cases
Chicken pox:	
Arkansas	57
Georgia	116
Nevada	5
Dengue:	
Georgia	1
Dysentery:	
Georgia	19
Hookworm disease:	
Arkansas	1
Georgia	92
Mumps:	
Arkansas	22
Georgia	46
Nevada	14
Septic sore throat:	
Georgia	38
Tetanus:	
Georgia	2
Trichinosis:	
Georgia	3
Tularæmia:	
Nevada	1
Typhus fever:	
Georgia	13
Undulant fever:	
Georgia	2
Whooping cough:	
Arkansas	6
Georgia	55
Nevada	33

Cases of Certain Communicable Diseases Reported for the Month of September, 1930, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid and paratyphoid fever	Whooping cough
Maine	12	7	105	66	28	0	46	24	146
New Hampshire	----	11	----	----	8	0	----	6	----
Vermont	54	2	6	8	6	0	12	4	35
Massachusetts	117	166	142	90	244	0	406	48	517
Rhode Island	5	19	4	1	27	0	34	11	48
Connecticut	23	25	12	25	54	0	128	17	120
New York	242	241	241	254	306	10	1,774	249	1,367
New Jersey	91	206	73	32	150	0	433	67	297
Pennsylvania	245	379	245	174	474	0	601	396	776
Ohio	174	163	65	60	482	93	599	305	355
Indiana	34	58	9	4	128	73	217	54	56
Illinois	144	387	56	164	400	64	673	196	521
Michigan	118	164	82	48	344	22	375	117	518
Wisconsin	134	28	104	118	153	20	129	32	548
Minnesota	70	56	6	----	119	11	226	22	83
Iowa	23	17	10	18	94	36	22	19	40
Missouri	26	105	40	27	107	19	219	132	74
North Dakota	7	12	7	64	24	3	12	26	41
South Dakota	13	42	12	1	24	36	6	11	19
Nebraska	32	14	18	12	47	45	18	17	55
Kansas	30	45	20	27	131	10	119	49	107
Delaware	2	5	3	3	16	0	39	25	1
Maryland	31	45	12	17	60	0	[1] 226	211	113
District of Columbia	2	44	23	----	13	0	67	15	8
Virginia	74	156	92	----	186	9	109	213	204
West Virginia	10	81	45	----	108	15	38	240	65
North Carolina	39	456	18	----	321	2	----	166	325
South Carolina	26	267	7	28	57	0	94	169	114
Georgia	21	81	47	11	73	18	79	168	41
Florida	8	24	3	----	11	0	53	13	32
Kentucky [2]	----	----	----	----	----	----	----	----	----
Tennessee	29	91	31	5	126	6	142	268	50
Alabama	18	107	30	15	116	5	377	117	75
Mississippi	218	87	61	90	44	5	231	127	283
Arkansas	15	21	1	23	43	5	[1] 22	134	45
Louisiana	4	108	12	1	57	4	[1] 153	134	20
Oklahoma [3]	----	94	10	2	64	25	27	171	14
Texas	----	76	----	----	38	----	----	58	----
Montana	28	6	5	15	57	0	56	39	79
Idaho	1	16	12	7	22	6	7	7	52
Wyoming	2	4	1	1	15	0	----	3	11
Colorado	15	35	80	62	33	5	96	58	132
New Mexico	1	16	9	12	19	1	59	62	16
Arizona	----	25	11	4	23	1	122	27	33
Utah [2]	----	----	----	----	----	----	----	----	----
Nevada	4	----	----	----	----	----	[1] 2	1	1
Washington	84	35	34	67	118	59	139	26	162
Oregon	28	9	85	84	38	5	51	26	63
California	264	130	192	367	176	42	835	73	408

[1] Pulmonary.
[2] Reports received weekly.
[3] Exclusive of Oklahoma City and Tulsa.

Case Rates per 1,000 Population (Annual Basis) for the Month of September, 1930, Based on Provisional Populations

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid and paratyphoid fever	Whooping cough
Maine	0.18	0.11	1.60	1.00	0.43	0.00	0.70	0.36	2.22
New Hampshire		.29			.21	.00		.16	
Vermont	1.83	.07	.20	.27	.20	.00	.41	.14	1.19
Massachusetts	.33	.47	.41	.25	.70	.00	1.16	.14	1.48
Rhode Island	.09	.34	.07	.02	.48	.00	.60	.19	.85
Connecticut	.17	.19	.09	.19	.41	.00	.97	.13	.91
New York	.23	.23	.23	.24	.29	.01	1.70	.24	1.31
New Jersey	.27	.62	.22	.10	.45	.00	1.30	.20	.89
Pennsylvania	.31	.48	.31	.22	.60	.00	.76	.50	.98
Ohio	.32	.30	.12	.11	.88	.17	1.09	.56	.65
Indiana	.13	.22	.03	.02	.48	.27	.82	.20	.21
Illinois	.23	.62	.09	.26	.64	.10	1.07	.31	.83
Michigan	.29	.41	.20	.12	.86	.05	.94	.29	1.29
Wisconsin	.56	.12	.43	.49	.63	.08	.53	.13	2.27
Minnesota	.33	.27	.03		.56	.05	1.07	.10	.39
Iowa	.11	.03	.05	.09	.46	.18	.11	.09	.20
Missouri	.09	.35	.13	.09	.36	.06	.73	.44	.25
North Dakota	.12	.21	.12	1.14	.43	.05	.21	.46	.73
South Dakota	.23	.74	.21	.02	.42	.63	.11	.19	.33
Nebraska	.28	.12	.16	.11	.41	.40	.16	.15	.48
Kansas	.19	.29	.13	.17	.85	.06	.77	.32	.69
Delaware	.10	.25	.15	.15	.82	.00	1.99	1.27	.05
Maryland	.23	.34	.09	.13	.45	.00	[1] 1.68	1.57	.84
District of Columbia	.05	1.10	.57		.32	.00	1.67	.37	.20
Virginia	.37	.78	.46		.93	.05	.55	1.07	1.02
West Virginia	.07	.57	.32		.76	.11	.27	1.68	.46
North Carolina	.15	1.74	.07		1.23	.01		.63	1.24
South Carolina	.18	1.87	.05	.20	.40	.00	.66	1.19	.80
Georgia	.09	.34	.20	.05	.31	.08	.33	.70	.17
Florida	.07	.20	.02		.09	.00	.44	.11	.26
Kentucky [2]									
Tennessee	.13	.42	.14	.02	.59	.03	.66	1.25	.23
Alabama	.08	.49	.14	.07	.53	.02	1.73	.54	.34
Mississippi	1.32	.53	.37	.54	.27	.03	1.40	.77	1.71
Arkansas	.10	.14	.01	.15	.28	.03	[1] 1.14	.88	.29
Louisiana	.02	.63	.07	.01	.33	.02	[1] 1.89	.78	.12
Oklahoma [3]		.55	.06	.01	.38	.15	.16	1.01	.08
Texas		.16			.08			.12	
Montana	.64	.14	.11	.34	1.29	.00	1.27	.88	1.79
Idaho	.03	.44	.33	.19	.60	.16	.19	.19	1.42
Wyoming	.11	.22	.05	.05	.81	.00		.16	.59
Colorado	.18	.41	.94	.73	.39	.06	1.13	.68	1.55
New Mexico	.03	.45	.26	.34	.54	.03	1.67	1.76	.45
Arizona		.69	.31	.11	.64	.03	3.39	.75	.92
Utah [2]									
Nevada	.53					.00	[1] 1.27	.13	.13
Washington	.65	.27	.26	.52	.92	.46	1.08	.20	1.26
Oregon	.36	.11	1.08	1.07	.48	.06	.65	.33	.80
California	.56	.28	.41	.78	.37	.09	1.77	.16	.87

[1] Pulmonary.
[2] Reports received weekly.
[3] Exclusive of Oklahoma City and Tulsa.

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of November, 1930, by departments of health of certain States to other State health departments

Disease	Illinois	Kansas	Minnesota	Missouri	New York
Chicken pox	1				
Diphtheria			1		
Gonorrhea			1		
Poliomyelitis			1		
Smallpox	2				
Syphilis		7	1		
Trachoma			1		
Tuberculosis	17		39		
Typhoid fever	2			1	4

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 97 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 32,020,000. The estimated population of the 90 cities reporting deaths is more than 30,430,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended December 27, 1930, and December 28, 1929

	1930	1929	Estimated expectancy
Cases reported			
Diphtheria:			
45 States	980	1,588	
97 cities	450	724	1,055
Measles:			
44 States	2,795	3,133	
97 cities	1,138	551	
Meningococcus meningitis:			
45 States	88	197	
97 cities	41	91	
Poliomyelitis:			
46 States	53	23	
Scarlet fever:			
45 States	3,221	3,518	
97 cities	1,392	1,304	1,433
Smallpox:			
45 States	440	1,216	
97 cities	45	107	33
Typhoid fever:			
45 States	186	128	
97 cities	45	25	28
Deaths reported			
Influenza and pneumonia:			
90 cities	826	932	
Smallpox:			
90 cities	0	0	

City reports for week ended December 27, 1930

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded, and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1921 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland	5	1	0	1	0	0	0	2
New Hampshire:								
Concord	0	0	0	----	0	0	0	0
Manchester	0	1	0	----	0	13	0	0
Vermont:								
Barre	1	0	0	----	0	0	0	0
Burlington	3	0	2	----	0	0	0	0
Massachusetts:								
Boston	61	41	13	3	1	45	3	26
Fall River	6	5	2	----	0	1	6	2
Springfield	8	5	2	----	0	4	1	3
Worcester	15	6	3	1	0	2	0	1
Rhode Island:								
Pawtucket	3	1	1	----	0	0	0	2
Providence	9	11	7	----	0	0	1	7
Connecticut:								
Bridgeport	1	7	1	----	0	0	1	3
Hartford	2	8	2	----	0	66	0	3
New Haven	8	1	0	----	0	8	7	0
MIDDLE ATLANTIC								
New York:								
Buffalo	30	17	7	----	0	7	21	22
New York	167	200	58	25	16	85	26	172
Rochester	12	8	0	----	1	1	2	3
Syracuse	26	4	1	----	0	2	2	1
New Jersey:								
Camden	6	6	3	1	1	21	3	3
Newark	37	21	13	3	1	3	7	9
Trenton	6	3	0	----	0	1	0	1
Pennsylvania:								
Philadelphia	91	73	11	3	2	24	18	36
Pittsburgh	78	23	10	----	1	7	8	29
Reading	10	3	0	----	0	4	12	1
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	11	14	1	----	2	5	10	11
Cleveland	100	41	7	4	2	6	28	12
Columbus	15	6	7	1	2	1	1	5
Toledo	72	11	10	----	0	2	4	5
Indiana:								
Fort Wayne	5	5	1	----	0	3	0	3
Indianapolis	25	8	6	----	1	3	3	19
South Bend	5	1	0	----	0	0	0	3
Terre Haute	2	1	0	----	0	1	0	3
Illinois:								
Chicago	71	126	96	8	2	14	27	50
Springfield	2	1	0	----	0	0	0	2
Michigan:								
Detroit	84	63	38	4	2	3	4	30
Flint	16	4	2	----	0	1	0	2
Grand Rapids	1	2	0	----	0	1	0	0

City reports for week ended December 27, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—con.								
Wisconsin:								
Kenosha	34	1	0		0	1	9	0
Madison	54	1	6			1	28	
Milwaukee	135	20	3	1	1	5	38	11
Racine	33	3	3		0	0	1	0
Superior	2	0	0		0	0	0	1
WEST NORTH CENTRAL								
Minnesota:								
Duluth	2	0	0		0	1	0	2
Minneapolis	20	18	6		1	9	4	11
St. Paul	19	10	1	1	1	1	0	3
Iowa:								
Davenport	0	1	0			2	0	
Des Moines	2	3	1			0	1	
Sioux City	6	1	1			0	0	
Waterloo	15	0	0			0	0	
Missouri:								
Kansas City	21	8	7		0	3	7	8
St. Joseph	1	2	0		0	0	0	3
St. Louis	26	44	11			644	8	
North Dakota:								
Fargo	5	0	0		0	0	0	1
Grand Forks	0	0	0			0	0	
South Dakota:								
Sioux Falls	0	0	0			0	0	
Nebraska:								
Omaha	10	6	2		0	1	0	5
Kansas:								
Topeka	5	2	0	1	1	0	0	2
Wichita	1	3	0		0	0	0	4
SOUTH ATLANTIC								
Delaware:								
Wilmington	1	1	0		0	0	0	5
Maryland:								
Baltimore	90	32	15	11	1	8	14	28
Cumberland	0	1	0		0	0	0	2
Frederick	9	1	0		0	0	1	0
District of Columbia, Washington	16	17	8	2	2	12	0	17
Virginia:								
Lynchburg	3	3	0		0	1	5	1
Norfolk	3	3	0		0	0	0	4
Richmond	1	7	3		2	16	1	3
Roanoke	5	2	0		1	0	0	1
West Virginia:								
Charleston	3	1	1		0	0	3	0
Wheeling	6	2	0		0	2	1	3
North Carolina:								
Raleigh	1	1	1		0	0	0	0
Wilmington	20	1	0		0	0	0	2
Winton-Salem	2	2	1		0	0	3	4
South Carolina:								
Charleston	4	1	0	24	3	0	0	2
Columbia	6	0	0		0	0	0	8
Greenville	2		0		0	0	0	0
Georgia:								
Atlanta	1	5	13	10	1	17	0	6
Brunswick	0	0	0		0	0	0	0
Savannah	0	1	0	2	1	0	0	4
Florida:								
Miami	1	3	2		0	0	0	1
St. Petersburg		1			0			2
Tampa	1	2	1		1	6	0	1

City reports for week ended December 27, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL								
Kentucky:								
Covington	0	1	0	----	0	0	0	0
Tennessee:								
Memphis	• 35	6	5	----	1	1	0	9
Nashville	2	2	1	----	0	6	0	6
Alabama:								
Birmingham	3	5	7	4	2	47	0	5
Mobile	1	1	1	----	0	0	0	3
Montgomery	0	1	0	----	----	0	0	----
WEST SOUTH CENTRAL								
Arkansas:								
Forth Smith	0	1	0	----	----	0	0	----
Little Rock	0	1	0	----	0	0	0	1
Louisiana:								
New Orleans	0	13	8	4	6	0	0	20
Shreveport	0	1	3	----	0	5	1	4
Oklahoma:								
Tulsa	9	4	5	----	----	7	1	----
Texas:								
Dallas	7	13	8	----	1	2	0	4
Forth Worth	10	5	0	----	0	0	0	11
Galveston	0	0	1	----	0	0	0	3
Houston	0	7	12	----	1	0	1	9
San Antonio	4	5	9	----	1	0	0	12
MOUNTAIN								
Montana:								
Billings	1	0	0	----	0	0	0	3
Great Falls	3	2	0	----	0	1	1	0
Helena	0	0	0	----	0	0	0	0
Missoula	0	0	0	----	0	0	1	0
Idaho:								
Boise	1	0	0	----	0	0	0	1
Colorado:								
Denver	41	9	6	----	0	6	9	16
Pueblo	2	1	0	----	0	16	0	1
New Mexico:								
Albuquerque	1	1	0	----	0	0	0	2
Arizona:								
Phoenix	0	1	0	----	0	0	0	2
Utah:								
Salt Lake City	----	3	----	----	----	----	----	----
Nevada:								
Reno	0	0	0	----	0	0	0	0
PACIFIC								
Washington:								
Seattle	12	5	3	----	----	1	12	----
Spokane	15	2	0	----	----	2	0	----
Tacoma	3	3	4	----	0	0	0	3
Oregon:								
Portland	7	11	0	1	0	2	11	6
Salem	1	0	0	----	0	0	2	0
California:								
Los Angeles	20	40	12	25	4	5	2	40
Sacramento	5	2	1	1	0	0	4	5
San Francisco	9	17	0	2	3	0	0	6

City reports for week ended December 27, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	2	7	0	0	0	0	0	0	0	13	23
New Hampshire:											
Concord	0	0	0	0	0	0	0	0	0	0	11
Manchester	2	1	0	0	0	0	0	0	0	0	10
Vermont:											
Barre	0	2	0	0	0	0	0	0	0	1	2
Burlington	1	0	0	0	0	0	0	0	0	1	7
Massachusetts:											
Boston	73	60	0	0	0	10	1	0	0	54	209
Fall River	3	5	0	0	0	1	0	0	0	0	18
Springfield	9	9	0	0	0	2	0	0	0	1	35
Worcester	11	23	0	0	0	2	0	0	0	7	57
Rhode Island:											
Pawtucket	1	9	0	0	0	0	0	0	0	0	17
Providence	9	14	0	0	0	1	0	0	0	1	75
Connecticut:											
Bridgeport	9	8	0	0	0	3	0	1	0	1	22
Hartford	7	6	0	0	0	2	0	0	0	1	24
New Haven	5	3	0	0	0	1	0	0	0	6	51
MIDDLE ATLANTIC											
New York:											
Buffalo	27	23	0	0	0	5	1	0	0	17	134
New York	193	146	0	0	0	94	8	2	0	98	1,512
Rochester	9	49	0	0	0	2	1	0	0	10	67
Syracuse	12	13	0	0	0	2	0	1	0	6	54
New Jersey:											
Camden	6	6	0	0	0	0	0	0	0	2	19
Newark	22	17	0	0	0	4	0	1	0	12	106
Trenton	4	10	0	0	0	0	0	0	0	1	25
Pennsylvania:											
Philadelphia	84	117	0	0	0	20	2	1	1	16	415
Pittsburgh	37	37	0	0	0	10	0	1	0	6	199
Reading	3	1	0	0	0	0	0	0	0	0	22
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	16	33	0	0	0	10	1	11	0	0	123
Cleveland	40	46	0	0	0	10	0	0	0	8	189
Columbus	11	13	0	0	0	4	0	0	0	0	87
Toledo	14	7	0	1	0	5	0	0	0	2	59
Indiana:											
Fort Wayne	4	0	0	2	0	0	0	0	0	1	37
Indianapolis	10	43	6	0	0	7	0	2	0	11	----
South Bend	3	3	0	1	0	1	0	0	0	1	18
Terre Haute	3	4	1	0	0	1	0	0	0	0	23
Illinois:											
Chicago	120	206	0	0	0	41	2	6	0	22	656
Springfield	2	2	0	0	0	0	0	0	0	0	26
Michigan:											
Detroit	96	58	2	1	0	28	1	0	0	41	298
Flint	12	16	0	0	0	2	0	0	0	7	19
Grand Rapids	11	13	0	0	0	1	0	1	0	2	30
Wisconsin:											
Kenosha	3	4	0	0	0	0	0	0	0	2	9
Madison	3	6	0	0	----	----	0	0	----	----	----
Milwaukee	30	10	0	0	0	5	0	0	0	20	105
Racine	6	7	0	0	0	1	0	0	0	0	10
Superior	3	2	0	0	0	0	0	0	0	1	11
WEST NORTH CENTRAL											
Minnesota:											
Duluth	11	1	0	0	0	1	0	0	0	0	26
Minneapolis	62	4	1	0	0	1	1	0	0	0	107
St. Paul	28	4	1	0	0	1	0	0	0	5	56

City reports for week ended December 27, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL—con.											
Iowa:											
Davenport	2	1	0	2	----	----	0	0	----	0	----
Des Moines	10	5	1	4	----	----	0	0	----	0	32
Sioux City	2	18	0	0	----	----	0	0	----	0	----
Waterloo	2	0	0	1	----	----	0	0	----	0	----
Missouri:											
Kansas City	14	8	3	0	0	5	0	1	0	1	89
St. Joseph	2	0	0	0	0	1	0	0	0	0	25
St. Louis	35	73	1	0	0	6	1	2	0	5	212
North Dakota:											
Fargo	1	2	0	0	0	0	0	0	0	0	4
Grand Forks	1	0	0	0	----	----	0	0	----	0	----
South Dakota:											
Sioux Falls	2	0	0	11	----	----	0	0	----	0	8
Nebraska:											
Omaha	5	15	2	16	0	0	0	0	0	3	54
Kansas:											
Topeka	2	0	0	0	0	0	0	0	0	0	13
Wichita	4	2	0	5	0	2	0	0	0	1	29
SOUTH ATLANTIC											
Delaware:											
Wilmington	3	2	0	0	0	0	0	1	0	0	37
Maryland:											
Baltimore	30	25	0	0	0	7	2	0	0	0	214
Cumberland	0	2	0	0	0	1	0	0	0	0	17
Frederick	0	0	0	0	0	1	0	0	0	0	2
Dist. of Columbia:											
Washington	23	23	0	0	0	9	0	2	0	1	137
Virginia:											
Lynchburg	0	1	0	0	0	1	0	3	0	0	13
Norfolk	3	3	0	0	0	2	0	0	0	2	----
Richmond	6	14	0	0	0	4	0	0	0	2	56
Roanoke	3	2	0	0	0	0	0	0	0	0	19
West Virginia:											
Charleston	2	0	0	0	0	0	0	0	0	1	21
Wheeling	2	1	0	0	0	0	0	0	0	0	22
North Carolina:											
Raleigh	1	0	0	0	0	1	0	0	0	3	11
Wilmington	0	0	0	0	0	1	0	0	0	2	12
Winston-Salem	2	2	0	0	0	1	0	0	0	0	19
South Carolina:											
Charleston	0	2	0	0	0	4	0	0	0	0	41
Columbia	0	2	0	0	0	1	0	0	0	0	25
Greenville	----	1	----	0	0	0	----	0	0	0	----
Georgia:											
Atlanta	5	13	1	0	0	7	0	2	0	1	85
Brunswick	0	0	0	0	0	1	0	0	0	0	5
Savannah	2	0	0	0	0	2	1	0	0	0	24
Florida:											
Miami	2	5	0	0	0	0	0	0	0	2	20
St. Petersburg	0	----	0	----	0	0	0	----	0	----	11
Tampa	2	0	1	0	0	1	0	0	0	0	18
EAST SOUTH CENTRAL											
Kentucky:											
Covington	1	8	0	0	0	1	0	0	0	0	20
Tennessee:											
Memphis	6	24	1	0	0	2	0	0	0	0	72
Nashville	3	6	0	0	0	2	0	3	0	0	44
Alabama:											
Birmingham	2	16	0	0	0	5	1	0	0	0	70
Mobile	0	0	0	0	0	1	0	0	0	0	29
Montgomery	0	3	0	0	----	----	0	0	----	0	----

City reports for week ended December 27, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0			0	0		0	
Little Rock	2	3	0	0	0	0	0	0	0	0	
Louisiana:											
New Orleans	7	5	0	1	0	14	3	0	0	0	187
Shreveport	2	2	0	0	0	1	0	0	0	0	32
Oklahoma:											
Tulsa	2	6	1	5			0	0		0	
Texas:											
Dallas	6	5	0	1	0	2	0	0	0	1	64
Fort Worth	1	6	1	0	0	2	0	0	0	0	36
Galveston	0	0	0	0	0	0	0	0	1	0	15
Houston	3	2	1	2	0	3	0	0	0	0	70
San Antonio	2	0	0	1	0	7	0	0	0	0	73
MOUNTAIN											
Montana:											
Billings	1	0	0	4	0	1	0	0	0	3	10
Great Falls	3	8	0	0	0	0	0	0	0	3	5
Helena	0	0	0	0	0	0	0	0	0	0	4
Missoula	1	0	0	0	0	0	0	0	0	16	3
Idaho:											
Boise	2	0	0	0	0	1	0	0	0	0	8
Colorado:											
Denver	12	28	0	0	0	5	0	1	0	16	92
Pueblo	1	0	1	0	0	0	0	0	0	3	9
New Mexico:											
Albuquerque	0	0	0	0	0	2	0	0	0	0	11
Arizona:											
Phoenix	0	0	0	0	0	2	0	0	0	0	11
Utah:											
Salt Lake City	1		1				0				
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	4
PACIFIC											
Washington:											
Seattle	8	9	1	0			1	1		15	
Spokane	7	4	4	2			0	0		0	
Tacoma	3	6	4	4	0	1	0	0	0	0	23
Oregon:											
Portland	7	1	8	2	0	0	0	0	0	11	57
Salem	0	0	0	0	0	0	0	0	0	0	
California:											
Los Angeles	31	15	1	4	0	18	1	2	0	2	384
Sacramento	2	1	1	0	0	3	0	0	0	2	31
San Francisco	17	7	1	0	0	8	0	0	0	6	154

City reports for week ended December 27, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Maine:									
Portland	0	0	0	0	0	0	0	1	1
Massachusetts:									
Boston	2	0	0	0	0	0	0	2	0
Springfield	0	0	1	0	0	0	0	0	0
Worcester	1	0	0	0	0	0	0	5	0
MIDDLE ATLANTIC									
New York:									
New York	4	5	0	1	0	0	1	1	1
New Jersey:									
Newark	1	1	1	1	0	0	0	0	0
Pennsylvania:									
Philadelphia	1	1	0	0	0	0	0	0	0
Pittsburgh	2	1	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	1	0	0	0	0	0	0	0	0
Cleveland	0	0	1	0	0	0	0	0	0
Columbus	0	0	1	1	0	0	0	0	0
Indiana:									
Indianapolis	2	1	0	0	0	0	0	0	0
Illinois:									
Chicago	5	1	0	1	0	0	1	3	1
Michigan:									
Detroit	6	2	0	0	0	0	0	0	1
Flint	0	1	0	0	0	0	0	0	0
Wisconsin:									
Madison	1	0	0	0	0	0	0	0	0
Milwaukee	2	0	0	0	0	0	0	0	0
Racine	0	0	1	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	1	0	0	0	0	0	0	0	0
Iowa:									
Davenport	1	0	0	0	0	0	0	0	0
Missouri:									
St. Louis	2	0	0	0	0	0	0	0	0
Nebraska:									
Omaha	2	0	0	0	0	0	0	0	0
SOUTH ATLANTIC [1]									
District of Columbia:									
Washington [1]	1	1	0	0	0	0	0	1	0
West Virginia:									
Charleston	1	1	0	0	0	0	0	0	0
North Carolina:									
Raleigh	0	0	0	0	0	2	0	0	0
Wilmington	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston	0	0	0	1	2	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	1	0	0	0	0	0	0	0	0
Alabama:									
Birmingham	0	0	0	1	1	0	0	1	0
Montgomery	0	0	0	0	1	0	0	0	0

[1] Typhus fever: 4 cases; 1 case at Baltimore, Md.; 1 case at Washington, D. C.; and 2 cases at Savannah, Ga.

City reports for week ended December 27, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	0	0	0	0	2	2	0	1	1
Shreveport	0	0	0	0	0	2	0	1	0
Oklahoma:									
Tulsa	1	0	0	0	0	0	0	0	0
Texas:									
Dallas	0	0	0	0	1	2	0	0	0
Fort Worth	0	0	0	0	0	1	0	0	0
Galveston	0	0	0	0	0	1	0	0	0
Houston	0	0	0	0	0	3	0	0	0
MOUNTAIN									
Colorado:									
Denver	2	1	0	0	0	0	0	0	0
Arizona:									
Phoenix	0	2	0	0	0	0	0	0	0
PACIFIC									
Oregon:									
Portland	0	0	0	0	0	0	0	1	0
California:									
Los Angeles	2	0	0	0	0	0	1	2	0
San Francisco	2	2	0	0	1	0	0	3	0

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended December 27, 1930, compared with those for a like period ended December 28, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

28444°—31——3

Summary of weekly reports from cities November 23 to December 27, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Nov. 29, 1930	Nov. 30, 1929	Dec. 6, 1930	Dec. 7, 1929	Dec. 13, 1930	Dec. 14, 1929	Dec. 20, 1930	Dec. 21, 1929	Dec. 27, 1930	Dec. 28, 1929
98 cities	89	139	[2] 92	146	[3] 90	134	[4] 96	128	[5] 73	120
New England	80	177	111	112	117	117	[6] 130	168	69	126
Middle Atlantic	50	123	61	110	50	112	65	106	49	113
East North Central	123	167	113	191	[7] 122	170	[8] 120	167	103	167
West North Central	108	114	99	121	95	148	87	110	53	67
South Atlantic	60	144	[9] 104	127	[9] 113	107	[9] 91	107	79	79
East South Central	155	157	162	226	155	137	94	123	94	109
West South Central	164	259	[10] 159	362	[11] 147	293	[10] 219	225	153	171
Mountain	77	17	[12] 0	157	26	61	17	61	[5] 67	35
Pacific	111	56	76	84	64	58	97	56	47	82

MEASLES CASE RATES

98 cities	109	74	[2] 146	98	[3] 167	113	[4] 194	109	[5] 185	91
New England	148	70	202	81	250	85	[6] 173	92	279	90
Middle Atlantic	73	33	89	54	89	47	91	59	74	51
East North Central	28	101	28	93	[7] 27	133	[8] 29	94	28	97
West North Central	636	100	933	216	1,055	202	1,387	210	1,250	146
South Atlantic	40	22	[9] 57	4	[9] 74	28	[9] 128	39	114	30
East South Central	74	0	175	14	337	14	310	0	364	0
West South Central	11	38	[10] 12	46	[11] 8	61	[10] 20	133	26	88
Mountain	275	131	[12] 51	165	146	104	163	139	[5] 258	78
Pacific	12	249	31	377	31	464	7	418	19	326

SCARLET FEVER CASE RATES

98 cities	178	212	[2] 207	252	[3] 229	277	[4] 236	249	[5] 227	216
New England	241	258	246	276	237	375	[6] 312	310	323	299
Middle Atlantic	156	116	187	148	196	172	219	176	200	165
East North Central	224	361	259	409	[7] 318	438	[8] 300	355	288	311
West North Central	137	183	194	231	205	271	273	235	241	179
South Atlantic	172	139	[9] 211	159	[9] 241	193	[9] 193	253	163	144
East South Central	243	137	337	144	425	89	223	48	385	75
West South Central	142	118	[10] 100	156	[11] 94	137	[10] 80	99	64	122
Mountain	223	348	[12] 120	392	206	322	292	583	[5] 404	322
Pacific	97	266	113	355	83	340	97	244	99	246

SMALLPOX CASE RATES

98 cities	8	14	[2] 7	19	[3] 15	23	[4] 9	23	[5] 7	18
New England	0	0	0	0	0	2	[9] 0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	4	13	1	26	[7] 3	29	[8] 6	31	3	20
West North Central	66	48	47	64	120	56	47	60	42	58
South Atlantic	0	0	[9] 0	0	[9] 0	0	[9] 0	0	0	2
East South Central	0	0	0	0	0	0	0	7	0	7
West South Central	4	11	[10] 4	19	[11] 8	34	[10] 16	34	19	27
Mountain	34	35	[12] 205	78	146	78	112	52	[5] 45	44
Pacific	9	75	12	60	7	118	12	113	24	77

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimates as of July 1, 1930, and 1929, respectively.
[2] Raleigh, N. C., Shreveport, La., and Denver, Colo., not included.
[3] South Bend, Ind., Raleigh, N. C., Fort Smith, Ark., and Shreveport, La., not included.
[4] Hartford, Conn., Grand Rapids, Mich., Raleigh, N. C., and Shreveport, La., not included.
[5] Salt Lake City, Utah, not included.
[6] Hartford, Conn., not included.
[7] South Bend, Ind., not included.
[8] Grand Rapids, Mich., not included.
[9] Raleigh, N. C., not included.
[10] Shreveport, La., not included.
[11] Fort Smith, Ark., and Shreveport, La., not included.
[12] Denver, Colo., not included.

Summary of weekly reports from cities November 23 to December 27, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Nov. 29, 1930	Nov. 30, 1929	Dec. 6, 1930	Dec. 7, 1929	Dec. 13, 1930	Dec. 14, 1929	Dec. 20, 1930	Dec. 21, 1929	Dec. 27, 1930	Dec. 28, 1929
98 cities	10	5	[2] 10	5	[3] 8	6	[4] 9	5	[5] 7	4
New England	11	2	7	2	18	7	[6] 10	0	2	2
Middle Atlantic	3	2	8	4	7	6	3	4	3	3
East North Central	4	5	10	4	[7] 7	3	[8] 10	3	13	1
West North Central	8	6	6	2	6	6	8	8	6	2
South Atlantic	29	4	[9] 17	6	[9] 4	7	[9] 11	4	15	9
East South Central	13	34	13	48	20	14	40	0	20	34
West South Central	75	15	[10] 28	0	[11] 25	8	[10] 28	38	0	8
Mountain	9	26	[12] 17	26	0	9	9	17	[5] 11	0
Pacific	7	2	12	10	7	7	7	2	7	10

INFLUENZA DEATH RATES

91 cities	9	11	[2] 10	17	[13] 10	16	[4] 10	19	[5] 12	19
New England	2	4	4	11	4	7	[6] 2	9	2	9
Middle Atlantic	11	5	6	14	8	9	5	18	11	13
East North Central	7	10	8	9	[7] 5	15	[8] 10	14	8	13
West North Central	0	21	12	27	21	12	15	15	9	15
South Atlantic	9	17	[9] 19	28	[9] 22	19	[9] 19	13	22	26
East South Central	29	15	15	60	29	60	37	52	22	30
West South Central	15	55	[10] 37	47	[10] 12	78	[10] 25	66	34	94
Mountain	26	17	[12] 34	17	9	0	17	26	[5] 0	26
Pacific	9	13	3	13	9	19	12	28	21	19

PNEUMONIA DEATH RATES

91 cities	112	106	[2] 102	136	[13] 108	150	[4] 115	158	[5] 130	143
New England	71	92	66	74	109	135	[6] 108	157	109	94
Middle Atlantic	125	101	107	139	109	156	133	165	132	155
East North Central	78	84	78	126	[7] 85	116	[8] 70	117	95	116
West North Central	92	126	130	126	145	174	95	180	115	174
South Atlantic	165	129	[9] 143	131	[9] 121	191	[9] 128	184	159	152
East South Central	155	224	177	239	140	216	125	216	184	194
West South Central	165	156	[10] 139	238	[10] 176	230	[10] 147	234	203	234
Mountain	223	157	[12] 137	165	154	192	215	235	[5] 235	209
Pacific	86	104	74	138	74	107	156	138	166	104

[2] Raleigh, N. C., Shreveport, La., and Denver, Colo., not included.
[3] South Bend, Ind., Raleigh, N. C., Fort Smith, Ark., and Shreveport, La., not included.
[4] Hartford, Conn., Grand Rapids, Mich., Raleigh, N. C., and Shreveport, La., not included.
[5] Salt Lake City, Utah, not included.
[6] Hartford, Conn., not included.
[7] South Bend, Ind., not included.
[8] Grand Rapids, Mich., not included.
[9] Raleigh, N. C., not included.
[10] Shreveport, La., not included.
[11] Fort Smith, Ark., and Shreveport, La., not included.
[12] Denver, Colo., not included.
[13] South Bend, Ind., Raleigh, N. C., and Shreveport, La., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended December 27, 1930.—The Department of Pensions and National Health reports cases of certain communicable diseases from eight Provinces of Canada for the week ended December 27, 1930, as follows:

Province	Influenza	Poliomyelitis	Smallpox	Typhoid fever
Prince Edward Island [1]				
Nova Scotia				1
New Brunswick				1
Quebec	43			7
Ontario				20
Manitoba				1
Saskatchewan		1		1
British Columbia			5	6
Total	43	1	5	37

[1] No case of any disease included in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended December 27, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended December 27, 1930, as follows:

Disease	Cases	Disease	Cases
Chicken pox	54	Ophthalmia neonatorum	1
Diphtheria	31	Puerperal septicemia	2
Erysipelas	9	Scarlet fever	79
German measles	1	Tuberculosis	31
Influenza	43	Typhoid fever	7
Measles	46	Whooping cough	29
Mumps	14		

DENMARK

Communicable diseases—October, 1930.—During the month of October, 1930, cases of certain communicable diseases were reported in Denmark, as follows:

Disease	Cases	Diseases	Cases
Cerebrospinal meningitis	5	Paratyphoid fever	12
Chicken pox	14	Poliomyelitis	13
Diphtheria and croup	510	Puerperal fever	20
Erysipelas	363	Scabies	1,016
German measles	1	Scarlet fever	223
Influenza	4,175	Tetanus	1
Lethargic encephalitis	7	Typhoid fever	6
Measles	1,082	Undulant fever (Bac. abort. Bang)	43
Mumps	248	Whooping cough	1,782

ITALY

Communicable diseases—Four weeks ended August 10, 1930.—During the four weeks ended August 10, 1930, cases of certain communicable diseases were reported in Italy as follows:

Disease	July 14-20, 1930		July 21-27, 1930		July 28-Aug. 3, 1930		Aug. 4-10, 1930	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	29	28	41	35	31	29	25	23
Cerebrospinal meningitis	10	9	14	12	10	7	7	6
Chicken pox	82	52	60	36	36	30	53	42
Diphtheria and croup	281	182	280	177	314	196	337	223
Dysentery	81	28	45	17	81	28	78	27
Lethargic encephalitis			4	3	3	2	7	6
Measles	1,340	328	1,092	287	835	265	741	246
Poliomyelitis	14	9	15	13	8	7	15	13
Scarlet fever	273	123	242	109	261	126	250	104
Typhoid fever	911	417	903	434	974	463	1,137	539

PANAMA CANAL ZONE

Communicable diseases—November, 1930.—During the month of November, 1930, certain communicable diseases, including imported cases, were reported in the Panama Canal Zone and terminal cities, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox	6		Measles	34	1
Diphtheria	8		Pneumonia		22
Dysentery (amoebic)	10		Tuberculosis		31
Leprosy		1	Typhoid fever	5	
Malaria	116	2	Whooping cough	5	

TRINIDAD (BRITISH WEST INDIES)

Port of Spain—Vital statistics—November, 1929 and 1930.—The following statistics for the month of November, 1929 and 1930, are taken from a report issued by the Public Health Department of Port of Spain, Trinidad:

	November			November	
	1929	1930		1929	1930
Number of births	182	190	Deaths under 1 year	9	22
Birth rate per 1,000 population	33.4	34.3	Infant mortality rate per 1,000 births	49.5	115.8
Number of deaths	94	90			
Death rate per 1,000 population	17.2	16.3			

YUGOSLAVIA

Communicable diseases—November, 1930.—During the month of November, 1930, certain communicable diseases were reported in Yugoslavia, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	62	3	Puerperal septicemia	7	3
Cerebrospinal meningitis	11	8	Rabies	1	1
Diphtheria and croup	1,633	189	Scarlet fever	1,408	203
Dysentery	44	12	Tetanus	26	14
Erysipelas	190	8	Typhoid fever	603	84
Leprosy	1		Typhus fever	2	
Measles	1,185	15			

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	November, 1930: 1	8	15	22	29	December, 1930: 6	13	20	27	Jan. 3, 1931
Afghanistan	C	P	P													
China:																
Amoy	C			2												
	D			2												
Canton	C	2			1	1										
	D	1														
Shanghai	C			34	38	1		1								
	D			3	4											
Shensi Province	C			P												
Swatow	C		3	2												
Tientsin	C		2	1												
India	C	25,121	42,893	51,551	36,529	5,222	5,689	4,146								
	D	13,822	22,358	23,559	17,635	2,733	2,915	2,149								
Bassein	C			1												
Bombay	C		14	1	16	17	1	1		2	2	4	5			
	D		8	2	11	10	6	1		2	1	1	3			
Calcutta	C	220	63	27	24	7	7	11	8	4	6	2	10			
	D	128	30	12	15	4	2	6	4	4	4	1	7			
Madras	C		1		2		1									
	D		1		2											
Rangoon	C	1	1	2	1											
	D	1	1	1	1											
Tuticorin	C				1				1	4		1				
	D				1				1							
India (French):																
Chandernagor	C	1		1	3						1					
	D				1											
Pondicherry	C				1				1	1	1	1	1			
	D				1					1	1	1	1			
India (Portuguese)	C		1	1			3	9	2							
	D			1			3	5	1							

Indo-China (see also table below):																	
Pnompenh	C	32	11		2	1					1	1					
	D	22	6								1	1					
Saigon and Cholon	C	10	5		2	1					1		2	1			
	D	3	1								1						
Philippine Islands: [1]																	
Ports—																	
Cebu	C	65	9	2													
	D	36	8	2													
Iloilo	C	29	64	10	1						1						1
	D	22	56	14	4						3						1
Manila	C		1	43	5												
	D			12	1												
Provinces—																	
Antique	C		20	47	40												
	D		12	34	18												
Bohol	C		138	49													
	D		79	20													
Bulacan	C	4	1	4	2												
	D			2	1												
Capiz	C	3	2	1													
	D	2	2														
Cebu	C	713	85	25													
	D	303	50	11													
Iloilo	C	309	571	238	50	10	10	4	6	11	21	13		7	5	13	
	D	193	376	151	40	7	7	3	6	8	11	8		6	4	10	
La Union	C	4															
Leyte	C	1															
	D	11															
Masbate	C	92	34														
	D	35	14														
Misamis, Occidental	C	3															
	D	3															
Negros, Occidental	C	568	343	122	28	12	3	19	22	44	38	48	33	28	19	33	
	D	368	237	91	20	12	3	12	14	33	17	45	28	22	16	26	
Negros, Oriental	C	23	8														
	D	13	4														
Nueva Acija	C	1															
	D	1															
Pampanga	C	2		1													
Pangasinan	C	3	1														
	D	2	1														
Rizal	C	1															
	D							4									
Samar	C		18	4	7	6	3	4	3	4	4			2		12	
	D		16	2	7	5	1	4	2	4	4			1	1	7	
Sorsogon	C							5									
	D	1						4									

[1] Figures for cholera in the Philippines Islands are subject to correction.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	November, 1930					December, 1930				Jan. 3, 1931
							1	8	15	22	29	6	13	20	27	
Philippine Islands—Continued.																
Provinces—Continued.																
Surigao	C	-------	28	1	(1)	------	------	------	------	------	------	------	------	------	------	------
	D	-------	17	2	------	------	------	------	------	------	------	------	------	------	------	------
Tarlac	C	-------	1	------	------	------	------	------	------	------	------	------	------	------	------	------
Siam	C	20	3	-------	4	3	------	1	------	------	1	1	------	------	------	------
	D	9	2	-------	1	3	------	1	------	------	------	1	------	------	------	------
Bangkok	C	8	1	-------	3	1	2	------	------	2	1	------	1	2	------	------
	D	3	1	-------	2	1	1	------	------	2	1	------	1	2	------	------
Songkla	C	10	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------
	D	6	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------
On vessel: S. S. Malwa from Shanghai	D	-------	-------	1	------	------	------	------	------	------	------	------	------	------	------	------

[1] During the period from Aug. 24 to Sept. 26, 1930, 26 cases of cholera with 17 deaths were reported in Manitum, Surigao Province, P. I.

PLAGUE

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29	December, 1930 6	13	20	27
Algeria:																		
Algiers	C	3	7	11	1	1	2	2	5	3	1	2			1	1		
	D								3									
Constantine	C	1																
Oran	C	3	4	10		4	4	2	1		1							
	D			1			2	1				1						
Plague-infected rats		2		10	2			4	1									
Philippeville	C			1	1		1	1	1		1							
Argentina: Cordoba Province—Chazon	C																	
Belgian Congo	C	2	2	5								1				1		
	D	2	2	3								1				1		
British East Africa (see also table below): Uganda	C	228	236	202	65	18	32	50	53	37								
	D	213	229	191	65	18	32	49	53	36								
Canary Islands: Las Palmas	D		1															
Ceylon:																		
Colombo	C	3	2	2	1	1		1				1	1		4	4		
	D	3	2	3	1	1		1				1	1		3	4		
Plague-infected rats		1										1	1	1				
China:																		
Manchuria—Tungliau and Nungan	C		30	29	2													
Shensi	C			P					P									
Dutch East Indies:																		
Batavia and West Java	C	84	83	79	22	14	26	45	41	36	27	39	53					
	D	84	83	76	22	14	26	41	42	37	28	39	53					
Plague-infected rats			1	3														
Java and Madura	D	217	158	260	75	68	95	97	124	140	107	139						
Egypt:																		
Alexandria	C	23	11	10	2	1	3	3	2	1	1	3		1		2	1	1
	D	10	6	8	3	1	1	1	3		2	2				1		
Assiout	C	2									3			2		7	5	1
	D	2									1					1		
Aswan	C													3				
Beni-Suef	C		1															
Gharbieh	C		3															
	D		1															
Girga	C	1		1													3	1
	D																	1
Minieh	C	3														1		
Port Said	C	1	1						1	1								

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29	December, 1930 6	13	20	27
France:																		
Marseille	C			5				4	2	1		1						
St. Ouen	C	1																
	D	1																
Gambia	C		4															
	D		4															
Greece (see also table below):																		
Patras	C	1																
Pyrgos	C					2												
India	C	377	877	2,497	672	527	627	545	604	616	558							
	D	256	477	1,132	289	222	269	288	336	288	317							
Bassein	C			2						1								
	D			3														
Bombay	C	1		1	1			1	1									
	D	1		1		1		1		1								
Plague-infected rats		52	35	47	21	13	16	14	2	9	11	8	11	5	12	4		
Madras Presidency	C	47	81	127	41	59	46	50	69	31	45	40						
	D	31	34	57	14	32	31	33	43	22	37	22						
Rangoon	C	2	3	10	2					1		1						1
	D	2	2	9	2					1								1
Plague-infected rats		6	7	8		1			1				1	1			1	
India (Portuguese)	D		P							3								
Indo-China (see also table below):																		
Pnompenh	C	2	4	3	1	1							1	3	1	1		
	D	2			1	1	1		1				1	3	1	1		
Saigon and Cholon	C		1	1	1													
Iraq: Baghdad	C	18	9		1							P	2	2				
	D	7	3		1								1	1				
Kwang-Chow-Wan	C	4	1															
Madagascar (see also table below): Tamatave	C	1	2	1		1			3		2			2	1	1		
	D					1			3					2		1		
Morocco	C	1	15						4		1						1	
	D		2															

Nigeria: Lagos	C	1	7	6		3		2	33	1	2	2	4	3	2			
	D	1	7	6		3		2		1	2	2	4	3	2			
Plague-infected rats		18	8	10				11	3	1	2	7	1					
Senegal (see table below).																		
Siam	C		7	3			1		3	1	1	1						1
	D		6	2					3	1		1						1
Bangkok	C		3									1				1		
	D		2									1				1		
Nagara Rajsima	C		2	1				1				1						
	D		2	1				1				1				8		
Syria: Beirut	C	9	2	5					1	1	3	1						
Tripolitania	C		2										4	6	2			
Tunisia:																		
Sfax district	C	6	1															
Tunis	C	5								1		1				P	12	
	D	1																
Union of Socialist Soviet Republics: Salsk Region	C	5	7															
	D	4	5															
Union of South Africa:																		
Cape Province	C	1	1	1					1									
	D	1	1	1														
Orange Free State	C			2														
	D			2														

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
British East Africa (see also table above):							
Kenya	C	107	97	87	53	58	14
Greece (see also table above)	C	1				2	
Indo-China (see also table above)	C	11	1	2	4		
Madagascar (see also table above):							
Antisirabe Province	C	3	24	11	21		
	D	3	24	11	21		
Miarinarivo Province	C	1	1	2	7		
	D	1	1	2	7		
Moramanga Province	C	3		27	18		
	D	3		27	17		
Tananarive Province	C	16	28	39	79		
	D	16	28	38	79		

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
Senegal:							
Baol [1]	C	2	62	79	48	53	
	D	2	48	20	23	35	4
Dakar [1]	C	53	140	108	3		
	D	117	122	90	8		
Louga [1]	C	60	138	75	61	37	10
	D	21	103	33	30	25	3
Thies [1]	C	52	54	34	12	24	27
	D	35	30	20	4	15	23
Tivaouane [1]	C	43	119	110	20	53	31
	D	28	70	54	14	31	25

[1] Reports incomplete.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX

[C indicates cases; D, deaths; P, present]

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930				November, 1930					December, 1930			
						4	11	18	25	1	8	15	22	29	6	13	20	27
Algeria:																		
Algiers	C	1	3															
Constantine	C	1									1							
Arabia: Aden	C	1																
Brazil:																		
Porto Alegre (alastrim)	C		1	1	12	7	7			14	14		20	8				
Rio de Janeiro	C										2							
British East Africa (see also table below):																		
Tanganyika	C	168	242	522	27	43	4	21	3	1		13						
	D	42	37	60	1		1	4	1									
British South Africa: Southern Rhodesia	C	31	1	1	14	39	98	2	2	54	1	38	12					
	D												2					
Canada:																		
Alberta	C	5	1	1		13	8	1					1					
British Columbia—Vancouver	C	6	6	2	1			1		3					1			
Manitoba	C			1														
Ontario	C	24	20	10	1		3	15		20	9		7	12	3			
North Bay	C																	1
Ottawa	C	13	7	5					14		9	14		8	1	1		
Toronto	C	1		1										2	2			
Quebec	C	3	5										1			1		
Montreal	C		7															
Saskatchewan	C	5	8	1		3				2			2		16			
China:																		
Changking	C	P	P	P	P	P	P	P	P	P	P	P	P					
Foochow	C	P	P	P		P				P		P						
Hong Kong	C	2																
	D	1																
Manchuria—																		
Harbin	C	2	2															
Kwantung—Dairen	C	8											2		1	1	1	
	D															1		
Nanking	C	P	P	P	P	P	P	P	P	P	P				P			

Shanghai—																	
Foreigners only	C	4	3	18				1	1		1				3	5	
Including natives	D			2								1				4	5
Swatow	D	1	4	2	1			3	1	1		1	1				
Tientsin	C				1						1		1	1			
Chosen (see table below).																	
Colombia:																	
Barranquilla	C		2														
Buenaventura	C	10	2														
Cali	D					1		1							1		
Curacao (alastrim)	C	2	1														
Dutch East Indies:																	
Borneo	C	2															
Java—																	
Batavia and West Java	C	8	12	11	10	2	1	1	2	13	11		2		2		
	D	5	5	4	1	1	1	1	2	1	1		1				
East Java and Madura	C	1															
Sanggi Islands	C	11	36	14					29								
	D	3	2	3					3								
Egypt: Port Said	C	3															
France (see table below).																	
Great Britain:																	
England and Wales	C	529	344	341	82	74	44	125	86	87	92	107	116	160	95	137	138
Ashton under Lyne	C	8															
Bradford	C	1				1	1	1	1	1					1		
Cardiff	C	2							1								
Leeds	C	1							1			2					
London	C	250	178	164	30	34	23	33	29	32	41	47	52	67	27	48	42
London and Great Towns	C	408	285	268	55	56	32	80	52	58	68	82	88	136	74	112	111
	D						1			1					1		
Stoke-on-Trent	C	9	2	2			1			1							
Scotland	C	1		5													
	D	1															
Honduras: Naco	C			5													
India	C	7,630	4,877	3,131	611	528	567	616	570	499	644						
	D	2,348	1,246	680	202	122	113	135	242	104	108						
Bombay	C	50	12	6			1								1		
	D	33	10	5											1		
Calcutta	C	73	25	14	3	4	3	2	2	4	3		3	5	6	4	
	D	56	21	9	3	4	3	1	2	2	3		3	2	4	2	
Cochin	C	6	14	3			8	4	3	5	10	7	4	5	6	7	
	D			1			1		1			2	2		2		
Karachi	C	1	4	4									2				
	D		3	2										1			
Madras	C	49	38	34	4	4	8	3	2	1	2	4	3	5	6	6	
	D	12	11	6	1	2	3	2			2				2	1	
Moulmein	C	18	2	1													
	D	1	1	1													
Negapatam	C	4	4	9	4	2	5	3	2	2	2	3	3		1	2	
Rangoon	C		3					2			1			1			
	D										1						
Tuticorin	C							1									
Vizagapatam	C						1										

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29	December, 1930 6	13	20	27
India (French):																		
Chandernagor	C	4		3			3			3								
	D	3		2			1			1								
Karikal	C	2	9	5	1												P	
	D	2	9	2	1													
Pondicherry Province	C	26	22	35	11	10	6	11	2	2		7	7	5				
	D	25	22	33	11	8	6	11	2	2		7	7	5				
India (Portuguese)	C	1	9	4														
	D	1	2															
Indo-China (see also table below):																		
Pnompenh	C	1					2							1				
	D	1	1											1				
Saigon and Cholon	C		1	1						2			2	1		1		
	D		3	1						2			1			1		
Iraq:																		
Baghdad	C	3	1	1		2												
	D	1	1															
Mossoul Liwa	C	67			63		4	2			6		7	9				
	D	20			27								1	1				
Ivory Coast (see table below).																		
Mexico (see also table below):																		
Jalisco (State) Guadalajara	D	4	1			2		1	1		1	1	1		2			
Juarez	C		2															
	D		1		1				1									
Mexico City and surrounding territory	C	37	10	12	1	3	5	4	1	3	3	2	1	2		3		
	D	8	6	5			1	2	1		1					6		
Vera Cruz	C									1								
Morocco (see table below).																		
Nicaragua: Porto Cabezas	C																2	
Poland	C								2	3		3	1	2				
Portugal:																		
Lisbon	C	13	50	27	4	5		7	12			8	11		15	11	21	
Oporto	C		1															
Siam	C	6				1												
	D	3																

Somaliland, British: Boales	C					1					1				1			
	D					1												
Spain	C	5	2	5														
Straits Settlements	C	11	8	6	1	1	1	2	3	3	4		3	9	1	3	3	
	D	3	3	1			1			1	1		1	2		2	2	
Sudan (Anglo-Egyptian)	C	12	42	128	25	1	56		3			2		3		47		
	D	1	3	52	2		5					1				5		
Sudan (French) (see table below).																		
Switzerland: Berne Canton	C	1	2		1													
Syria (see table below).																		
Tunisia: Tunis	C	1			2													
Turkey (see table below).																		
Union of South Africa:																		
Cape Province	C	P		P			P	P	P	P	P	P	P					
Orange Free State	C	P	P							1	1	P	P					
Transvaal	C		P	P	P		P	P	P	P	P	P	P					
Upper Volta	C													6				
On vessel:																		
S. S. Manoa, from Honolulu to San Francisco	C	1																
S. S. Muncaster, at Manila from Hong Kong	C																	1

Place		June, 1930	July, 1930	August, 1930			September, 1930			October, 1930			November, 1930			Dec. 1–10, 1930
				1–10	11–20	21–31	1–10	11–20	21–30	1–10	11–20	21–31	1–10	11–20	21–30	
Indo-China (see also table above)	C	213	238	59	34		54	52	86	32	62	164		86		38
Ivory Coast	C											4		2		9
Sudan (French)	C	76	34			39		P			17					43
	D	18				3					2					16
Syria: Beirut	C	7	2	1												

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
British East Africa (see also table above):							
Kenya	C	171	142	186		424	
Uganda	C	78					
	D	69					
Chosen	C	107		3	2		
	D	35					
Seishin	C	2	1	2			
	D	1					

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
France	C	51		1			
Mexico: Durango (see also table above)	D	4	3	3	3	2	
Morocco	C	18	5	3	8	4	4
Turkey	C	16					

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29	December, 1930 6	13	20	27
Algeria:																		
Algiers	C	6	2	3							1			2				
Constantine Department	C	2	3			2			1					1		1		
Oran	C	3	1	1			1	2						3		2		
Bulgaria	C	10	1	4	2		1	3			1	2	1	1	3	6		
	D	1																
China:																		
Manchuria—Harbin (see also table below)	C	2	2	2				1										
Shanghai	C		1															
Chosen (see table below).																		
Czechoslovakia (see table below).																		
Egypt:																		
Alexandria	C	1	1	3	1							2	1	1				
	D			1								2						
Beheira Province	C	15		1													1	
	D	2															1	
Cairo	C		7	2												1	1	
Port Said	C		4	1		1			1	1								
Great Britain: Scotland—Dunfermline	C	1																
Greece (see table below).																		
Ireland:																		
Irish Free State—																		
Galway County—Oughterard	C	2																
Leitrim County—Mohill	C	1																
Mayo County—																		
Ballina	C	1																
Castlebar	C		1															
Westport	C	2	1															
Roscommon County—																		
Roscommon	C	1																
Strokestown	C	1																
Wicklow County—Shillelagh	C	2																
Latvia (see table below).																		
Lithuania (see table below).																		

Mexico:																		
Durango	D			1	1		1											
Mexico City, including municipalities in Federal District	C	5	9	7			3	5	1	1	5	4	1	1		12		
	D		2	2			2		1		3		2	3		2		
Morocco	C	11	8	2					1		1	1	1					
	D							1										
Palestine	C	6	3	3		1	1	1			2	1	1	6			1	1
Poland	C	36	34	23	3	6	6	7	7	8	15	7	12		21	9		
	D	4	3	1	1			1					1		3	3		
Portugal: Oporto	C		1			1		1		2	1	1	2	2	2			
Rumania	C	28	9	4	3	4	1	6	4	13	10	14	19					
	D	8	2								1	1	1					
Spain	C	3		1			1	1			4				1			
	D	1		1			1	1							1			
Tunisia	C	24	10	6	1	1	1	9					5		23			
Turkey (see table below).																		
Union of South Africa:																		
Cape Province	C	P	P	P	P	P	P	P	P	P	P	P						
Municipality of East London	C	1		2			1					1	1					
Natal	C	1	P	P		P	P	2	P	P	P							
Orange Free State	C	P	P	P														
Transvaal	C	P	P	P	P	P	P	P	P	P	P	P	P					
Yugoslavia (see table below).																		

Place		June, 1930	July, 1930	Aug. 1930	Sept., 1930	Oct., 1930	Nov., 1930
China: Harbin (see also table above)	C		14	5		3	
Chosen: Seoul	C	2	3	2	1		
Czechoslovakia	C	1		1			16
Greece: Athens	C	3	6	6	4	4	4
Latvia	C	3	3	1	2		

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
Lithuania	C	16	18	7	24	1	5
	D			1	2		1
Turkey	C	2	7	2			3
Yugoslavia	C	6					

YELLOW FEVER

Brazil:	Cases
Campos, Rio de Janeiro Province, May 23, 1930	1
Para, June 23, 1930	2

Gold Coast:	Cases
July 10, 1930	1
Albosso, Aug. 4, 1930 (death)	1
Liberia, Monrovia, June 3, 1930	1
Nigeria, Lagos, July 12, 1930 (probably laboratory infection)	1

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